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## A NIGHT OF TERROR.

THE first object that caught my eye as I sat up in my bed was James; he was staring at me in the same confused state in which I looked at him, and both of us listened intently for some sound or cry which could tell us what was the matter. Screams we could hear plainly enough, but nothing intelligible. There was a sound as of barefooted people running with all their might along the passage outside our door, and the idea suggested itself simultaneously to our minds that the place was on fire. Without waiting to dress ourselves, we got out of our beds, and I had my hand on the gimlet with which we secured the latch of our door, when I felt a shock that caused me to reel across the room, till I fell against the wall on the opposite side; the bed followed me, and falling against James, seriously bruised his legs, and pinned him against the wainscot. For a moment we remained in this position, and then the house began to settle back on its foundations, and I was able to drag the bed a little way from the wall, and set him at liberty. We got to the door, and removed the gimlet; but the house was still so far from being level, that we had to break the door down before we could get out of the room. Many of the boards in the passage were torn apart and split to pieces; and between the passage and the staircase there was a gap into which I slipped, but, fortunately, though the fall hurt me very much, the opening was not wide enough to allow of my body passing through. Dragging my legs out as quickly as I could, I followed my husband down stairs into the street, no longer at a loss to understand the cause of the commotion which had roused us from our sleep: it was the first shock of an earthquake.

By the light of the moon, we could perceive that the two shocks had reduced several houses in the street to dust and broken timber, and from among these ruins rose cries, moans, and prayers, which chilled my blood, and almost paralysed the power of movement. From the houses that still remained standing, the people were bringing out what they considered of most value, some their children, others boxes or furniture. With our arms linked together, we pushed our way as well as we could through the crowd of fugitives that filled the street, now stumbling into holes so deep, that the sudden shock was painfully

felt through the whole frame, and a moment afterwards scrambling over heaps of rubbish. With great difficulty we had got as far as Montada's store, when we felt a movement of the earth, which made me feel as though my heart were rising into my throat, followed instantly after by a motion which made it appear to me that the ground was falling away beneath my feet, and leaving me suspended in the air. This was repeated several times. Houses were falling on our right hand and on our left, pieces of timber and stones were driven about us with a force as great as though shot from a gun; many were struck dead, and others were beaten down and sunk to the ground, where they were trampled to death. Just before us was a woman with one side of her face torn in a most frightful manner, whom I recognised, on seeing the other side, as the keeper of a shop where James and I had spent nearly an hour the previous evening in buying some gold-embroidered leather. I spoke to her, but she did not heed me; and so great was her terror, that she did not appear conscious of the horrible injuries she had received, notwithstanding that the blood was streaming down her neck, and dyeing the front of her night-dress a vivid crimson. With rolling gait and uncertain steps, we staggered forward, as it seemed to us, but in reality we did not advance a yard; Montada's store was still in front of us, and rocking frightfully. By great exertion in a sidelong direction, we put a little more space between us and it; when down it came with a tremendous crash, throwing a volley of stones over the very spot where we had been standing, and burying many persons beneath its ruins. One poor man, carrying two children in his arms, was crushed almost at our feet by the end of one of the beams, and lay screaming with agony, without its being possible for us to help him. The fall of this house was succeeded by a cessation of the motion of the earth, and a rush was made over the ruins, regardless of the wretched creatures below. The merciful Providence which had protected us hitherto, enabled us to reach the open space in front of the civic hall without injury, and here we halted, feeling that we should be safer than in the narrow streets.

For the space of half an hour or thereabouts, there was no renewal of the earthquakes, and we had begun to hope that the evil was over. Hundreds of people, most of them with little beside their night-dresses on them, were huddled about us, when suddenly,

without a sound to give notice of what was coming, the earth opened in a zigzag line right across the Plaza, a crowd of persons dropping into the chasm, which closed, opened, and closed again, and all in an instant. We were so close as to see this distinctly, and though it was over so quickly that comparatively few of those on the Plaza knew what had happened, the cries of mortal terror which were uttered by those who had been on the brink of the grave, told those at a distance of some new disaster, and the air was so filled with shrieks and prayers for mercy that I grew sick with terror. Some cried aloud that it was the Day of Judgment, and sank grovelling to the earth; a desperate-looking man beside us, who gave no cry nor breathed a prayer, was violently beating his own head with a large stone; and another was savagely attacking every person within his reach like a wild beast.

All this time the moon was shining brilliantly in a cloudless firmament, and when we looked upwards in our terror, it caused hope to spring up in our hearts to see how serene everything was above; but when our attention was again directed to what was passing about us, it added an indescribable horror to the scene, and for a moment shook our faith in the existence of a merciful Creator at the very time when we most needed its support. Our great desire was to escape to the hills, the mind associating stability with these masses of earth; but it was impossible to get through the crowd which hemmed us in on every side, and seemed afraid to venture again in the narrow street. Instead of half an hour elapsing before the next shock was felt, there could not have been half that time, and this shock was far more violent than the previous one, and lasted longer. There was the same sickening motion, not altogether unlike what is experienced on shipboard; but the motion itself was nothing compared with the effects of the terror it caused to feel the earth rocking beneath us, and this, too, heightened by the spectacle of houses crumbling to dust, bleeding bodies, shrieks, and every species of woful utterance which human organs are capable of forming. From constant travel, I was physically almost as strong as my husband, but with the most earnest desire not to add to his alarm and distress, I was obliged to cling to him for support while this horrid din was raging about us. The dull roaring sound which accompanied the movements of the earth gradually died away, and at the same time the openings of chasms in the Plaza were renewed. Wherever these gaps occurred, a number of individuals disappeared, and until it closed again, there was a long dark line, from which persons made frantic efforts to recoil. Sometimes these chasms were straight as an arrow; at other times, they were as crooked as forked lightning. To try to change our position while this was going on, was useless, for there was nothing to indicate what direction the next opening might take, and motion on the part of such a multitude could only increase the loss of life. Once, indeed, we found ourselves on a small triangularly shaped piece of ground, with a chasm on both sides of us of about a yard in width. Persons fell into this gap all round us, but several were drawn out again alive; James drew out three himself, and very few were crushed in it when it closed. This sudden closing of the earth caused some of the most hideous sights which it is possible to conceive. The ground did not always open wide enough to admit the human body, or it opened into chasms of several feet, but not of a greater depth than four or five feet; and the inconceivable rapidity with which they opened and closed, caused many persons to be caught in them by their legs, in the case of the narrow chasms; and in the case of the broad but shallow gaps, men, women, and children were crushed together in one mass, as regarded the lower part of their bodies, leaving the heads separate, and the upper part of the

bodies blended together as closely as though they were one body with many heads.

As soon as there was a longer pause than usual between these gapings, we were able to make our way off the Plaza, in consequence of the great thinning of the crowd; and taking the broadest of two openings which presented themselves before us, we proceeded down it, keeping as near the middle as possible, for every now and then a house fell to the ground without the slightest warning, though, while the earth was steady, with little danger except to those immediately opposite to it. We might have advanced about a quarter of a mile, when James stopped to knock at a door. I did not at first see where we were, but on looking more attentively, I discovered that we were at the house of a man of whom we had frequently hired horses during our stay in Nanhuisaleco. Nobody answered his call, though he beat at the gate with a stone with all his might. I urged him not to wait for horses, which might be unable to make their way with so much ease as ourselves, when he pointed to his foot, and told me he could walk no further; and I then saw that a vein against the ankle must have been cut open, for he was standing in quite a pool of blood. I hastened back as fast as my own wounded feet would allow me to a place where I had seen a dead body lying, and from this I tore some strips of linen sufficient to bind up my husband's feet and my own. Greatly relieved by the protection this gave us from the sharp stones, and the accidental kicks and tread of other fugitives, we left the shelter of the gateway, and joined those who, like ourselves, were making for the open country, not on the supposition that we should be safe there, but that we should have, at all events, one danger the less to encounter.

I have omitted to say that for some time we had perceived that it was becoming sensibly darker. The clouds of dust which rose from the falling houses, combined with that raised by the trampling of feet, concealed the moon from us, and made it difficult for us to avoid running against the houses, and impossible to prevent falling over heaps of rubbish. We could just distinguish a large, square, white house, with a flat roof, which we knew to belong to Luis Torellas, a friend of ours, when a gentle rise of the ground, accompanied by a low moaning sound, told us of what was coming. We stood still, and the ground had hardly subsided, when there came another and louder roar, and with it an upheaval of the ground compared with which all that had preceded it were insignificant. We were forced to drop on the ground from actual inability to remain upright; and here we sat tossed up and down in a frightful manner, and every moment apprehensive that one of the chasms like those we had seen might open beneath us and swallow us up. It now became so dark that we could see nothing whatever; and but for the incessant crashing of the falling houses, and the renewed cries and prayers, we might have supposed ourselves buried in the very centre of the earth. Vainly did we strive to distinguish if Torellas's house was still standing; we could not even see each other's face, so that I lost even that source of courage. Presently, the dull roar of the earthquake was mingled with, or drowned by, the crashes of thunder following the most vivid flashes of lightning I ever saw, which, though it left me in doubt at times whether I had not been struck blind, did us this service, that it allowed us to see that Torellas's house was still erect, and apparently uninjured. To add to the horrors of this night, a fire broke out in a street near us in two or more houses at the same time, caused either by the broken timbers falling over an unextinguished fire, or by the lightning. The dryness of the wood caused the flame to spread with amazing rapidity, and I confess that the light caused a feeling of satisfaction in my mind, which nobody

can realise who has not been in a position of imminent danger in the midst of total darkness. If I had been able to see what was passing in those houses and in the street between, I should have felt far otherwise.

The undulations of the earth, though fainter, still continuing, James proposed we should take refuge with Torellas for a time, seeing that the house had withstood the recent shocks, and not thinking it likely we should have any others more violent. We rose, holding each other tightly, and making our way to the door as direct as we could, groped about till we had found the fastening, when we pushed it open, and felt our way along the passage to the staircase. We knew our way to the principal apartments from having visited at the house so frequently, and we made our way from one to the other of these, notwithstanding the dead silence which followed my husband's calls for Torellas. We had opened the doors of several rooms, and had found them all in total darkness, and we were on the point of leaving the house, supposing that Torellas with his family had abandoned it, when we remembered a room which gave a fine view of the city and of the environs. In the intense darkness which prevailed, we had to grope a long time before we could find the door, but when we had found it and pushed it open, the glare which rushed into our eyes was terrible. I believed the building was in flames, but so horrible was the pain in my eyes, and so great the bewilderment caused by the brilliant light after being so long in such pitchy darkness, that I could not have fled if I had felt the fire laying hold of me. I covered my face with my hands, and as the pain diminished, I parted my fingers little by little, and let in the light gradually, till I was able to open my eyes to the light without protection. Madame Torellas was most kind in her attentions to me, even at such a moment, and her daughters were willing assistants. They brought water to wash our wounded feet; but my husband would not suffer the bandages to be removed, for fear of causing inflammation of the wounds, by exposing them to the air in such a hot climate, especially as we might within a minute have to rush out of the house. We were glad enough, however, to avail ourselves of their offered kindness in the matter of clothing, and when these arrangements were completed, we went to the window, and looked out.

The sight was grand and horrible. The flames which now rose from the houses on both sides of the street lit up the tower of the convent, which had hitherto resisted the shocks of the earthquake, with a bright-red glow, and shewed us every projection and crevice, even to the bird sitting in her nest, either kept there by her maternal instinct, or too bewildered to fly away. A little below this convent, the road widened several feet beyond what it was just below us, and at the bottom it narrowed again, and was shut in by a tanner's yard. This factory or store was blazing fiercely, and Torellas told us that one part of the building was used to store a large quantity of saltpetre. Most of the inhabitants had probably made their escape; but there were still many in the street who might have delayed their flight to save something from the general wreck, but were more likely plunderers who were taking advantage of the confusion and terror to help themselves to the property of others. If this were so, they paid dearly for their crime. A repetition of the shocks, so violent, that the broad, solid building in which we were shook and trembled, brought down the convent tower, which crushed the opposite houses on the two sides of the street into one mass, so that a low but flaming barrier cut off their escape, and shut them in on all sides. It was a dreadful sight to see the poor creatures running to and fro, seeking with frantic gestures an outlet, and finding none. Some fell in the middle of the street, insensible or dead; a few

leaped among the burning ruins, and were either consumed or made their escape, for they returned no more; but the greater part of them huddled together in the broadest part of the street, the stronger struggling savagely to force themselves into the centre of the group. The intense heat soon reduced strong and weak to one level, and for some minutes before motion ceased altogether, we could distinguish nothing but a writhing mass. Soon a pale bright flame seemed to be hovering over it, like a bird of prey over a dying camel in the desert, sinking lower and lower, till it suddenly seized upon it and wrapped it in a shroud of fire. Faint with horror, yet with something like a feeling of thankfulness in my heart that we had not wandered into this street in the obscurity, I turned away from the window, and sat down on a couch. James said he intended to try and get out of the town as soon as it was daylight, but Torellas declared that his confidence in the stability of his house was so perfect that nothing would induce him to abandon it, but that his wife and family were free to go with us if they chose. At the first appearance of daylight, we all ascended to the roof of the house, to get a more perfect view of the extent of the damage that had been done. The shocks were still frequent, but less violent, and we comforted ourselves with the belief that the worst was over. In every direction there were gaps where a heap of rubbish alone remained to indicate the place whereon a building had formerly stood; and while we were looking, the air at a particular spot would be filled with dust, shewing that another house had been added to the list of the fallen. Our host brought us some food and wine, and had gone down to get some cigars for himself and James, when a prolonged dull roar told us that another shock was approaching. The house trembled with a vibratory motion which made me stretch out my hands to lay hold of something to steady myself. All at once the vibratory motion changed for one of upheaval, the house parted in two, and we felt ourselves descending to the earth with a rapidity which took my breath away, and I became for the first time insensible. When I recovered my senses, my first thought was of my husband. I opened my eyes, and found him still alive, and, as it turned out, with limbs unbroken, though greatly bruised. He was feeling my pulse, and looking anxiously at my face for signs of recovery, and his joy when I opened my eyes was evident even to my enfeebled vision. After a moment, I thought of Madame Torellas and her daughters, and asked him in a faint voice if they were safe; but he only pointed to what appeared a heap of torn clothing without speaking, and I comprehended that they—who at the moment when the division took place were standing at the edge of the terrace, looking at the still burning ruins—had been precipitated into the street and killed.

When I attempted to move, I suffered intense pain in my right leg, which was so helpless that I felt it must be broken. My husband examined it, and found that it was fractured a little below the knee, and that any further walking on my part was quite out of the question. He went away for a minute or two, and came back with some strips of linen and pieces of rafters, which he smoothed and cut with his knife into splints, and set the bone as well as circumstances would admit of. After he had done this, he searched for and found some of the food which poor Torellas had brought up, and made me swallow a few mouthfuls; but I wanted water most, and this he was unable to get without going some distance, wherefore I preferred to suffer thirst rather than let him go out of my sight. Daylight made no difference in the severity of the shocks; but shortly after sunrise they became less frequent, and about noon seemed to have ceased altogether, and people began to appear again in the street. My



husband appealed to several who passed to assist him in removing me to a place of shelter, but they all refused or pretended not to hear him; probably they had lost relatives the previous night, and were too anxious to discover anything respecting them to pay attention to the words of a stranger. It was impossible to carry me himself in the condition I was in, on account of the pain it gave me to move, and we were obliged, though with great reluctance, to consent to a separation while he went to Batalha, the horse-dealer, to get a mule to carry me, a vehicle of any kind being useless in such encumbered streets. Every minute seemed an hour while I was waiting his return, and yet minute after minute passed, and he did not make his appearance. I knew the distance was not great, and making every allowance, as I thought, for the difficulties he might have to overcome, he ought to have been back long since, when a darkening of the air, accompanied this time by a strong sulphureous smell, gave notice that another calamity was about to burst on the devoted city. The openings of the ground were more frequent and far more terrible to see, now that the daylight illuminated them, and shewed their unfathomable depth. One of these split open so close to the ruins on which I was lying, that a portion rolled in. The sun's rays fell directly into it, and I shuddered as I gazed into the gulf, which was deeper than the deepest abyss I had ever imagined myself falling into in the wildest nightmare. I drew back trembling with horror and fright, and buried my face in my arms to shut out the dreadful spectacle. I prayed for my husband's return, but he came not. I would have dragged myself along in the direction in which he had gone, if I had been able, but I was entirely powerless; and to add to the terrors of my position, I now discovered that a circular stone building (used, I believe, for the temporary confinement of prisoners), trembled with every shock, and cracked as it was in different directions, threatened every instant to bury me beneath its ruins.

It will not be easy for anybody to realise my feelings as I lay on this heap of rubbish, watching the quivering blocks of stone and the powdered mortar which was grated out from between them, and fell upon me in a shower of dust. I entreated several who passed to come and remove me, if only for a few yards, so that I might be out of reach of the building; and some were about to help me, but when they saw the imminence of the danger, they, like the Levite of old, turned away, and passed by on the other side. The good Samaritan came at last, however, in the form of a poor woman, carrying a baby in her arms. In answer to my appeal, she laid her babe tenderly on the ground, lifted me up, and carried me beyond the reach of this last danger; after which she offered to get me some water, an offer I accepted with a grateful heart, for the pain I was enduring, and the anxiety I had undergone, had parched my throat to that degree that every breath I drew caused me the most acute pain, heightened, perhaps, by the sulphureous exhalations which now filled the air. She was going to carry her babe with her, but I took it from her as she was stooping to pick it up, and told her I would take care of it. Poor little innocent, it wanted no further care. It seemed asleep, but it was a sleep from which it would never wake again; probably it had been suffocated by the pressure of the crowd on the preceding night. The kind woman soon returned with some water, and I raised it to my lips eagerly, anticipating the most delicious sensations from the refreshing coolness it sent through me the instant it touched my lips. I found, to my disappointment, that contact between it and my throat caused me so much pain that I could only swallow a few mouthfuls, and I was obliged to content myself with the relief it afforded me to hold it in my mouth.

I questioned the charitable creature who had so

opportune come to my assistance as to where she was going, and found she had no fixed idea beyond getting into the open country, upon which I proposed that if she would remain with me till my husband returned, we would take her with us. She accepted my offer, and to my great joy she had not long to wait before he returned, with two mules which he had found in a stable in the suburbs, the house to which he first went having been shaken down. He seated me on the mule, and though we had still great difficulties to contend against, in the form of clouds of dust, heaps of ruins, and occasional gaps in the ground, we gradually approached the outskirts of the town, which we ultimately succeeded in passing through, and finally found a place of refuge in a shepherd's hut, which an earthquake might swallow up, but could not shake down, from its being built, except a few stones heaped up round the lower part, of stakes, wicker-work, and dried sheep-skins with the wool on them.

We did not return to Nanhualco till April 1860, some months after the catastrophe, when we found that traces of the earthquakes still remained, in the form of deep chasms, which gaped in a way that forcibly recalled the horrors we had seen on that occasion.

#### FOSSIL PLANTS, AND THE LESSONS WHICH THEY TEACH.

'THE study of vegetable fossils,' says Professor Hensley, 'is far less satisfactory than that of animal remains, since, in the great majority of cases, the structures most distinctive of the subordinate group of plants are formed of very perishable matter. Genera, and even species, of animals may be recognised by bones and shells, which are of a very persistent nature, and are found abundantly in stratified rocks. The vegetable bodies which can resist the long-continued action of water are few, and these mostly afford only characters of large sections of the vegetable kingdom, without furnishing generic, far less specific distinctions.'

It is probable, for the above reasons, that the fossil plants which have hitherto been found, only partially represent the former plant-creations which preceded the present one, and there is no denying that ideas obtained from fossil plants must necessarily be superficial and very speculative; but there is a sufficient amount of evidence furnished by them, to shew satisfactorily that the first plants did not originate from seed, but from spores. They were undoubtedly vascular cryptogams, and these formed, for a long succession of ages, a leading feature in the vegetation which formerly covered the earth's surface. It is true that the cellular cryptogams, such as mosses, liverworts, and lichens, have not been found, but these doubtless existed. Ferns and mosses usually grow together, and lichens prepare the way for both. It is not surprising that the remains of the cellular cryptogams should have disappeared, when we remember that the preservation of plants as fossils necessarily depends on their structure, and that these lower cryptogams are totally devoid of woody and vascular tissue, the most enduring parts of the organisation of plants. The vascular cryptogams have, however, been preserved in the greatest abundance. These consisted of gigantic trees with the most simple foliage, and of cylindrical stems without leaves—the tall columnar leafless form of the calamite, the lepidodendron, which appears to have been only a gigantic lycopodium or club-moss, and tree-ferns, with an undergrowth of herbaceous plants having neither flowers nor fruit, but carrying in their place simple sporules.

There can be no doubt, too, from the specimens and fragments of plants left in the oldest sedimentary rocks, that the first land-plants were swamp-plants. Dr Tuckerman, a distinguished American lichenologist, defines lichens to be 'perennial aerial algae,' and these

would be the first to seize upon the land as soon as it became visible. But the marine algae or sea-weed, and probably the most simple forms of them, were in reality the first vegetable inhabitants of our globe. These would be the first to form in the shallowing waters, before the land and water were separated from each other. The vegetative remains would seem to indicate for ages a swampy vegetation. The tree-ferns, whose remains are so abundant, would only grow in a moist warm climate; and the calamite is closely allied to our common equisetum or horse-tail, which is found in marshes, although now of a very diminutive size.

Ever since land has existed, there have been plants of tree-like proportions and bulk. It is not necessary that there should be a rich and varied flora for this result to be produced. Were there no other plants in existence now but those belonging to the natural order Rosaceæ, we should still have herbs, shrubs, and trees covering the landscape. The yellow cinquefoil (*Potentilla Canadensis*) and the wild strawberry (*Fragaria vesca*) are lowly herbaceous plants; the common blackberry (*Rubus villosus*) and the sweet-brier (*Rosa rubiginosa*) are shrubs; and the apple, pear, plum, and cherry are the fruits of trees; yet the whole of these are rosaceous plants. Therefore, notwithstanding the great sameness and cryptogamous character of the vegetation which covered these ancient landscapes, they were not without their trees.

As the land became more elevated and free from water, *Cycadaceæ*, or plants allied to the sago-palm; coniferous trees—such as pines and firs, with needle-shaped leaves, and rudimentary inconspicuous flowers of extreme simplicity of organisation—were added to these primeval forests; then trees with true leaves, such as the willow and maple; and along with them we find the first evidence of the creation of the more highly organised conspicuous flowers—for nature is always consistent with herself—flowers being, as is now universally admitted, nothing but the ordinary leaves of the stem brought together, in consequence of a loss of vegetative power in the branch on which they are borne, and metamorphosed with reference to the reproductive function. The first bee makes its appearance in the amber or fossil resin of the pines of the Eocene period; the fragments of the wings of butterflies and other flower-sucking insects are also frequently met with enclosed in the same substance. Trees of a low order of organisation, such as the birch, beech, oak, poplar, chestnut, and hornbeam, were probably as abundant in the forests of the Eocene period as they are now in our present woods. But there is no proof of the creation of rosaceous plants; these seem to be coeval with the first appearance of man.

Our forest trees were therefore not all created at the same time, but are the product of different geological eras; and the plant-covering with which the surface of our earth is now overspread, is only a fragment of many antecedent plant-creations, all of which have helped to fertilise and prepare the earth for the present one.

In order to appreciate the evidence on which these conclusions are founded, it is necessary for the reader to be a thoroughly practical botanist, and to be acquainted with the vegetation of different climates and localities. Thus prepared, he can understand and feel the force of the botanical evidence from fossil plants. They prove irresistibly that the present glorious and variegated vegetable creation was preceded by many others, is continuous with them, and the product of their labours. Those plants of a low type of organisation are the oldest inhabitants of the globe, the more highly organised plants have been introduced in succession, and the most highly organised at a comparatively speaking modern geological epoch.

Coniferous trees with needle-shaped leaves—such as

the pine, fir, and larch, also ferns, horse-tails, and club-mosses—are among the most ancient and persistent types. They have descended to us from the earliest periods of the creation. This remark applies especially to the natural order Conifera, which from the most ancient times until now, in new varieties and splendours, has continued to be developed. The first flowers among herbaceous plants appear to have been land and water lilies, and plants belonging to the natural order *Ericaceæ*, or the heath tribe, such as the whortleberry (*Vaccinium*) and the alpine rose (*Rhododendron*). Among trees bearing true leaves and conspicuous flowers, the tulip poplar (*Liriodendron tulipifera*), now abundant in Pennsylvania, North America, appears to be an ancient forest form; so also trees belonging to the natural order Leguminosæ, or pea tribe, such as the false acacia (*Robinia pseudo-acacia*) and the honey-locust (*Gleditsia triacanthos*). These trees all preceded rosaceous plants in the plan of creation. Trees bearing edible fruits, as well as beautiful blossoms—such as the peach, apricot, apple, pear, plum, and cherry—were introduced when the earth was fitted for the reception of man; their remains are only found in the geological formations now in progress, and therefore, like him, they must be regarded as among the most recent creations.

The most important fact taught by fossil plants is, that the organic and inorganic creation slowly assumed its present appearance, and the evidence would seem to lead us irresistibly to the conclusion, that changes have taken place in the organisation of plants, by which their forms have been gradually and contemporaneously adapted to the ever-changing landscape. Hence the history of the development of plants is intimately associated with the history of those physical changes which the earth's surface has undergone. Just as the present form of a grand and venerable tree which appears to us to be fixed, but in reality is as fleeting as all the other forms through which that tree has passed from its first life-movement in the seed, is the final result of a long series of antecedent changes, so it is with the globe which we inhabit. The present appearance, or, more truthfully speaking, phase of creation, is the necessary result of a long succession of antecedent changes of which the earth's crust has preserved the memorial. This world is but a great and ancient theatre, where the scenery of life is ever changing. And who dare say that the present arrangements of land and water, the forms of our herbaceous plants, shrubs and forest trees, are now any more fixed or unalterable than at any previous epoch. Nothing on earth is permanent, if there is any truth in the teachings of the past, and any constancy in nature.

Our ideas of a Divine Providence are certainly enlarged by these views of nature. To think that through the all but eternal ages during which our planet has gone on rolling round the sun, its plant-covering should have been continually improving in beauty, variety, and grandeur, and this, too, notwithstanding all the convulsions to which its crust has been subjected, visible everywhere in its shattered and uplifted strata! Fossil plants may be truly regarded as the remains of a system of vegetable life, developed under external conditions which are no longer the same in any part of the world. The calamite, lepidodendron, and other extinct forms of vegetation, on which our sun once shone, have disappeared for ever as living agents from the surface of our planet, because they have finished the work which Providence assigned them. They probably could not now exist in the present world, but they helped to carry on the work of creation whilst they did. The same remarks apply to the present living plants. There is not a moss or mountain floweret or forest tree at present in existence, which is not now contributing its part to the advance of nature; and all are just as beautifully adapted to the present stage of the world's progress.

husband appealed to several who passed to assist him in removing me to a place of shelter, but they all refused or pretended not to hear him; probably they had lost relatives the previous night, and were too anxious to discover anything respecting them to pay attention to the words of a stranger. It was impossible to carry me himself in the condition I was in, on account of the pain it gave me to move, and we were obliged, though with great reluctance, to consent to a separation while he went to Batalha, the horse-dealer, to get a mule to carry me, a vehicle of any kind being useless in such encumbered streets. Every minute seemed an hour while I was waiting his return, and yet minute after minute passed, and he did not make his appearance. I knew the distance was not great, and making every allowance, as I thought, for the difficulties he might have to overcome, he ought to have been back long since, when a darkening of the air, accompanied this time by a strong sulphureous smell, gave notice that another calamity was about to burst on the devoted city. The openings of the ground were more frequent and far more terrible to see, now that the daylight illuminated them, and shewed their unfathomable depth. One of these split open so close to the ruins on which I was lying, that a portion rolled in. The sun's rays fell directly into it, and I shuddered as I gazed into the gulf, which was deeper than the deepest abyss I had ever imagined myself falling into in the wildest nightmare. I drew back trembling with horror and fright, and buried my face in my arms to shut out the dreadful spectacle. I prayed for my husband's return, but he came not. I would have dragged myself along in the direction in which he had gone, if I had been able, but I was entirely powerless; and to add to the terrors of my position, I now discovered that a circular stone building (used, I believe, for the temporary confinement of prisoners), trembled with every shock, and, cracked as it was in different directions, threatened every instant to bury me beneath its ruins.

It will not be easy for anybody to realise my feelings as I lay on this heap of rubbish, watching the quivering blocks of stone and the powdered mortar which was grated out from between them, and fell upon me in a shower of dust. I entreated several who passed to come and remove me, if only for a few yards, so that I might be out of reach of the building; and some were about to help me, but when they saw the imminence of the danger, they, like the Levites of old, turned away, and passed by on the other side. The good Samaritan came at last, however, in the form of a poor woman, carrying a baby in her arms. In answer to my appeal, she laid her babe tenderly on the ground, lifted me up, and carried me beyond the reach of this last danger; after which she offered to get me some water, an offer I accepted with a grateful heart, for the pain I was enduring, and the anxiety I had undergone, had parched my throat to that degree that every breath I drew caused me the most acute pain, heightened, perhaps, by the sulphureous exhalations which now filled the air. She was going to carry her babe with her, but I took it from her as she was stooping to pick it up, and told her I would take care of it. Poor little innocent, it wanted no further care. It seemed asleep, but it was a sleep from which it would never wake again; probably it had been suffocated by the pressure of the crowd on the preceding night. The kind woman soon returned with some water, and I raised it to my lips eagerly, anticipating the most delicious sensations from the refreshing coolness it sent through me the instant it touched my lips. I found, to my disappointment, that contact between it and my throat caused me so much pain that I could only swallow a few mouthfuls, and I was obliged to content myself with the relief it afforded me to hold it in my mouth.

I questioned the charitable creature who had so

opportunely come to my assistance as to where she was going, and found she had no fixed idea beyond getting into the open country, upon which I proposed that if she would remain with me till my husband returned, we would take her with us. She accepted my offer, and to my great joy she had not long to wait before he returned, with two mules which he had found in a stable in the suburbs, the house to which he first went having been shaken down. He seated me on the mule, and though we had still great difficulties to contend against, in the form of clouds of dust, heaps of ruins, and occasional gaps in the ground, we gradually approached the outskirts of the town, which we ultimately succeeded in passing through, and finally found a place of refuge in a shepherd's hut, which an earthquake might swallow up, but could not shake down, from its being built, except a few stones heaped up round the lower part, of stakes, wicker-work, and dried sheep-skins with the wool on them.

We did not return to Nanhualcalco till April 1860, some months after the catastrophe, when we found that traces of the earthquakes still remained, in the form of deep chasms, which gaped in a way that forcibly recalled the horrors we had seen on that occasion.

#### FOSSIL PLANTS, AND THE LESSONS WHICH THEY TEACH.

'THE study of vegetable fossils,' says Professor Hensley, 'is far less satisfactory than that of animal remains, since, in the great majority of cases, the structures most distinctive of the subordinate group of plants are formed of very perishable matter. Genera, and even species, of animals may be recognised by bones and shells, which are of a very persistent nature, and are found abundantly in stratified rocks. The vegetable bodies which can resist the long-continued action of water are few, and these mostly afford only characters of large sections of the vegetable kingdom, without furnishing generic, far less specific distinctions.'

It is probable, for the above reasons, that the fossil plants which have hitherto been found, only partially represent the former plant-creations which preceded the present one, and there is no denying that ideas obtained from fossil plants must necessarily be superficial and very speculative; but there is a sufficient amount of evidence furnished by them, to shew satisfactorily that the first plants did not originate from seed, but from spores. They were undoubtedly vascular cryptogams, and these formed, for a long succession of ages, a leading feature in the vegetation which formerly covered the earth's surface. It is true that the cellular cryptogams, such as mosses, liverworts, and lichens, have not been found, but these doubtless existed. Ferns and mosses usually grow together, and lichens prepare the way for both. It is not surprising that the remains of the cellular cryptogams should have disappeared, when we remember that the preservation of plants as fossils necessarily depends on their structure, and that these lower cryptogams are totally devoid of woody and vascular tissue, the most enduring parts of the organisation of plants. The vascular cryptogams have, however, been preserved in the greatest abundance. These consisted of gigantic trees with the most simple foliage, and of cylindrical stems without leaves—the tall columnar leafless form of the calamite, the lepidodendron, which appears to have been only a gigantic lycopodium or club-moss, and tree-ferns, with an undergrowth of herbaceous plants having neither flowers nor fruit, but carrying in their place simple sporules.

There can be no doubt, too, from the specimens and fragments of plants left in the oldest sedimentary rocks, that the first land-plants were swamp-plants. Dr Tuckerman, a distinguished American lichenologist, defines lichens to be 'perennial aerial algae,' and these



would be the first to seize upon the land as soon as it became visible. But the marine alga or sea-weed, and probably the most simple forms of them, were in reality the first vegetable inhabitants of our globe. These would be the first to form in the shallow waters, before the land and water were separated from each other. The vegetative remains would seem to indicate for ages a swampy vegetation. The tree-feras, whose remains are so abundant, would only grow in a moist warm climate; and the calamite is closely allied to our common equisetum or horse-tail, which is found in marshes, although now of a very diminutive size.

Ever since land has existed, there have been plants of tree-like proportions and bulk. It is not necessary that there should be a rich and varied flora for this result to be produced. Were there no other plants in existence now but those belonging to the natural order Rosaceae, we should still have herbs, shrubs, and trees covering the landscape. The yellow cinquefoil (*Potentilla Canadensis*) and the wild strawberry (*Fragaria vesca*) are lowly herbaceous plants; the common blackberry (*Rubus villosus*) and the sweet-brier (*Rosa rubiginosa*) are shrubs; and the apple, pear, plum, and cherry are the fruits of trees; yet the whole of these are rosaceous plants. Therefore, notwithstanding the great sameness and cryptogamous character of the vegetation which covered these ancient landscapes, they were not without their trees.

As the land became more elevated and free from water, *Cycadaceae*, or plants allied to the sago-palm; coniferous trees—such as pines and firs, with needle-shaped leaves, and rudimentary inconspicuous flowers of extreme simplicity of organisation—were added to these primeval forests; then trees with true leaves, such as the willow and maple; and along with them we find the first evidence of the creation of the more highly organised conspicuous flowers—for nature is always consistent with herself—flowers being, as is now universally admitted, nothing but the ordinary leaves of the stem brought together, in consequence of a loss of vegetative power in the branch on which they are borne, and metamorphosed with reference to the reproductive function. The first bee makes its appearance in the amber or fossil resin of the pines of the Eocene period; the fragments of the wings of butterflies and other flower-sucking insects are also frequently met with enclosed in the same substance. Trees of a low order of organisation, such as the birch, beech, oak, poplar, chestnut, and hornbeam, were probably as abundant in the forests of the Eocene period as they are now in our present woods. But there is no proof of the creation of rosaceous plants; these seem to be coeval with the first appearance of man.

Our forest trees were therefore not all created at the same time, but are the product of different geological eras; and the plant-covering with which the surface of our earth is now overspread, is only a fragment of many antecedent plant-creations, all of which have helped to fertilise and prepare the earth for the present one.

In order to appreciate the evidence on which these conclusions are founded, it is necessary for the reader to be a thoroughly practical botanist, and to be acquainted with the vegetation of different climates and localities. Thus prepared, he can understand and feel the force of the botanical evidence from fossil plants. They prove irresistibly that the present glorious and variegated vegetable creation was preceded by many others, is continuous with them, and the product of their labours. Those plants of a low type of organisation are the oldest inhabitants of the globe, the more highly organised plants have been introduced in succession, and the most highly organised at a comparatively speaking modern geological epoch.

Coniferous trees with needle-shaped leaves—such as

the pine, fir, and larch, also ferns, horse-tails, and club-mosses—are among the most ancient and persistent types. They have descended to us from the earliest periods of the creation. This remark applies especially to the natural order Coniferae, which from the most ancient times until now, in new varieties and splendours, has continued to be developed. The first flowers among herbaceous plants appear to have been land and water lilies, and plants belonging to the natural order *Ericaceae*, or the heath tribe, such as the whortleberry (*Vaccinium*) and the alpine rose (*Rhododendron*). Among trees bearing true leaves and conspicuous flowers, the tulip poplar (*Liriodendron tulipifera*), now abundant in Pennsylvania, North America, appears to be an ancient forest form; so also trees belonging to the natural order Leguminosae, or pea tribe, such as the false acacia (*Robinia pseudo-acacia*) and the honey-locust (*Gleditsia triacanthos*). These trees all preceded rosaceous plants in the plan of creation. Trees bearing edible fruits, as well as beautiful blossoms—such as the peach, apricot, apple, pear, plum, and cherry—were introduced when the earth was fitted for the reception of man; their remains are only found in the geological formations now in progress, and therefore, like him, they must be regarded as among the most recent creations.

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Our ideas of a Divine Providence are certainly enlarged by these views of nature. To think that through the all but eternal ages during which our planet has gone on rolling round the sun, its plant-covering should have been continually improving in beauty, variety, and grandeur, and this, too, notwithstanding all the convulsions to which its crust has been subjected, visible everywhere in its shattered and uplifted strata! Fossil plants may be truly regarded as the remains of a system of vegetable life, developed under external conditions which are no longer the same in any part of the world. The calamite, lepidodendron, and other extinct forms of vegetation, on which our sun once shone, have disappeared for ever as living agents from the surface of our planet, because they have finished the work which Providence assigned them. They probably could not now exist in the present world, but they helped to carry on the work of creation whilst they did. The same remarks apply to the present living plants. There is not a moss or mountain floweret or forest tree at present in existence, which is not now contributing its part to the advance of nature; and all are just as beautifully adapted to the present stage of the world's progress.

Reader, if you cultivate a garden, as I hope you do, you can see the beginning and end of the lowly plants growing around your dwelling, and you know that they put forth a regular cycle of appendages of leaves, flowers, and fruit. It is the same with the forest trees, whose life-history covers a longer space of time. Now, if the cycle of life-changes which form collectively the life of a flower or a tree, are conducted on plan and system, why not those of the series of plant-creations which have preceded and prepared the way for the present one? I cannot help feeling that there is order and *prearrangement* in all these onward movements; and the wonder is that, despite the convulsions that have repeatedly shattered the planetary surface, the vegetation should have been ever improving. And now the most beautiful day of the creation has at last dawned; the air is pure and healthy; the empoisoned gases which escaped from the interior of the earth have disappeared. Our planet is now stable, and no more destructive revolutions menace its tranquil surface. Peace is at length established among the opposing forces of nature, which appear to have been reconciled only to achieve in man the last grand act of creation. The germ of his being existed from the first origin of things; to his introduction, all the changes of the past clearly point. The destiny of man, although through storm and revolution, will still be onward. Or at least the onward progress of nature should inspire that confidence.

#### HOME FROM THE COLONIES.

BETTER MANNERS AND MR JOHN LEECH.

IN a rather wicked book published some forty years ago, called *Real Life in London*, we learn how our immediate ancestors used to amuse themselves in the Great Metropolis. The letterpress of the volume was happily unintelligible to my youthful mind, but I remember being delighted, when a little boy, with its highly-coloured illustrations. It was not a work to lie about the drawing-room table at Trevarton even at that date, but I knew exactly the shelf in the library which it occupied, and could have placed the miniature scaling-ladder which was necessary for me to attain it, precisely underneath it even in the dark. *Tom* and *Bob* (the heroes of the book), exceedingly in the mode, in their queer green and blue coats, were my very good friends, and I was not in the least aware of what bad company I was keeping. I took with them 'A stroll down Drury Lane at five in the morning,' among the early breakfast-eaters, and the gentlemen returning from their suppers, and enjoyed it immensely. My sympathies, I am afraid, were with them in 'Catching the Charley napping,' where the one trips up the miserable old guardian of the peace as he emerges from his box, and the other runs off with his lantern and rattle. I wondered what pleasure all that gay company could find in sitting round a board of green cloth, and playing with dice, without the backgammon-board, which was indispensable, as I imagined, to their use; but I snatched a fearful joy from the spectacle represented at 'The theatre, Westminster,' where the performances (it was written beneath the plate) were 'of the old school.' A bear was depicted being tortured by a number of savage dogs and men in the presence of many members of what the book delighted to call the *haut ton*. Such an entertainment was in disrepute, it seems, even in those evil days, but still extant, just as prize-fighting is in our own time. With *Tom* and *Bob* this last was 'the noble science,' and patronised, they said, by the

'Corinthians'—which always struck me, although I never ventured to express the suspicion, as being a very gross anachronism.

The picture of 'A private turn-up in the drawing-room of a noble marquis,' will never fade from my retina: the time is midnight; the guests, all of the highest rank, and in coats of every hue (except the two noble seconds, who are in their shirt-sleeves), are standing round the combatants in attitudes of enthusiastic admiration; the Prince Regent (or somebody excessively like him) drunk, is feebly cheering them; the chaplain of the marquis regards them from his chair with an expression of countenance that certainly does not condemn their heroic exertions; the prize-fighters themselves, stripped to the waist, make a hideous contrast with the exaggerated splendours of the drawing-room—I see it all at this moment exactly as I did when I was a little lad just in jackets, standing on the top-rail of the library ladder, delighted with my occupation, but apprehensive lest my father,\* or my brother Tom (who would have been sure to tell of me), should suddenly open the door.

Such were doubtless the town amusements of our ancestors, and not more different, perhaps, from those of our own youth than are the now-a-day dissipations of our sons. It is evident to every middle-aged observer, although he may be too much *laudator temporis acti* to confess it, that coarseness and brutality are growing rare, and if vice be not actually upon the decline (as I believe it to be), that she pays a tribute to virtue in the adoption of a veil which she formerly took no pains to wear. How idle is it to talk of the Good Old Times when, fix them at what date we will, and make ourselves honestly acquainted with the manners, the laws, the opinions then prevalent, we find them abhorrent, not only to our daintier modern senses, but to natural morality and good feeling! That amiable class of persons which always insists upon the increasing wickedness of the world is totally ignorant of how bad it used to be, and judges mankind in general by comparison with its one exceptional purity. The want of acquaintance of these good people with what is really going on among their fellow-creatures, deprives their influence of half its value. Their morality is often legendary, and its rules directed against what Mr Carlyle calls 'extinct Satans,' amusements that have no longer the sting of vice in them. It was but yesterday that I took up an Exhibition-visitors' Guide-book to London, intended for this exclusive but by no means insignificant body. The Colosseum, the Polytechnic, and the Thames Tunnel were the only places therein licensed for amusement, with the exception of Bazaars, in the enumeration of which the editor seemed to take a morbid pleasure as being the nearest approach to vicious dissipation permissible. I can myself remember when Theatres were really haunts of iniquity, and when every supper-room in London rang with ribald strains. All this, however, is now changed; and honest gentlemen take their daughters to listen, unseen—in latticed cages, such as those in which the House of Lords immures its fair spectators—to innocent glee-singing in the very place whence Colonel Newcome took away his son in righteous wrath, because of infamous songs. Since acting and singing must exist, it is surely a matter of congratulation that they can now be beheld and listened to without a blush? There are doubtless

\* How strange and capricious a thing is memory! I am unable to call up again, with any distinctness, the face of my dear father, who died years after those childish days of mine, while the stupid figures of this vulgar picture, which I have never set eyes on since, I remember perfectly, so as to place each in the position it occupied.



plenty of places of amusement in London, vicious enough for the most profligate, but they no longer thrust themselves upon the well disposed. It is, after all, neither the virtuous nor the vicious that we should be principally concerned about in these matters, but the ordinary run of mortals—that is to say, four-fifths of a population. When the public amusements of a great and ancient city are upon the whole respectable, it is evident that a genuine civilisation prevails among the inhabitants. A colony, though it exhibits in its outlying districts some of the primitive virtues which do not flourish in the parent country, imports into its towns all the vices of civilisation, and is slow indeed to reform them. I am a colonist, and stand by my adopted country, but I do not believe the inhabitants of Melbourne to be more virtuous than those of modern London.

Again, there are few better evidences of national good feeling than is afforded by the conduct of a crowd. When I left this country, it was the reproach of our neighbours across the channel, and the sneer of those among our own countrymen who affected to despise 'the masses,' that an English crowd could never behave itself: that it was impossible to open parks and gardens to the public, because they would trample on the fences and pluck every flower they could lay hands on; while their behaviour in a sculpture gallery was represented as combining the worst characteristics of the Vandal and the Iconoclast. Even large-hearted kindly Leigh Hunt could only put forth the characteristic excuse for their fanaticism for cutting their names on everything that was softer than a clasp-knife, by contending that this was, after all, a natural yearning for immortality, and as much as could possibly be got by persons who did not write poems and essays. In the few pleasure-grounds that were at that time open to the public, the people were threatened with the vengeance of the law if they plucked a daisy; denunciatory placards warned them off the lawns; and the only notice that did not breathe fire and slaughter against transgressors, was that very commendable one in Hampton Court Gardens (I think), 'It is expected that the public will protect what is intended for the public to enjoy.' I find these matters changed indeed. A thin wire, or a single piece of string, is sufficient to keep the sturdiest 'navvy' from forbidden-ground, even if his children (who are comparatively speaking 'scollards') are not beside him to explain that the writing on the little board yonder is, 'Please to keep to the footpaths.' The beautiful gardens at Sydenham, which are roamed over by tens of thousands, six days a week, present no more trace of ravage than the grounds of the most exclusive nobleman; the delicate parterres are as untrodden, the stately trees as undisturbed. The fragile statues within the Fairy Palace run no danger of becoming Torsos; and its pictures, notwithstanding that the visitors are not disarmed before admission, are never 'pinked' by the too expatiative umbrella. It is remarkable, also, that this improvement has occurred notwithstanding a decided rise in the national high spirits—in our demonstrativeness upon holiday occasions. The English, so far as all but the aristocratic classes are concerned, no longer 'take their pleasures sadly,' as they were wont to do. The masses were never so *en rapport* with one another. They applaud, they dissent, they laugh far more readily and boisterously than of old. If M. Assolant and his brother-scribes would go down to Sydenham on a people's fête-day—like that of 'the Foresters'—and station themselves opposite the Merry-go-rounds, they could scarcely come away without their stereotyped notions about the dull and unimpassioned character of the English being greatly modified. The patent 'Invigorators'—which are simply scientific 'saws'—hold eight persons apiece, and all of these (with the exception of some female, perhaps, who may not be a good sailor, poor thing) are generally in hysterics of

laughter. If one or two sight-seers have taken a little more to drink than is good for them (which must needs happen when the million enjoys itself), their first impulse is always to embrace the policeman. If the proverb *in vino veritas* holds good in beer, the lower orders of this country have a very genuine, though latent, affection for those who used to be considered their natural enemies—the administrators of the law. I have seen intoxicated men at a French fête—and how inordinately they must have drunk of their national liquors to make such a thing possible!—but their sympathies did not prompt them to shake hands with any of those individuals who always with swords, and sometimes with fixed bayonets, direct and control the public festivities of that highly civilised land. When the citizen and the Gendarme sympathise in France, it is for revolution.

I confess that I am indignant at the calumnies recently cast upon my country which are the result of observation, but of tradition. There was a time, it is true, for I can remember it, when we were savage and stupid; when our recreations were coarse, and our capacity for wit was dull; but to be reproached for such matters at the present day by a people whose government permits vivisection and prohibits political caricatures, is a little too bad. One very tolerable test of the social state of a nation is the character of its popular prints. Gilray was not the last of our caricaturists who helped to extend and strengthen among foreigners the impression of our vulgarity and lack of wit. I can recollect what sort of pictures came down, long after his time, to country-houses to amuse folks in wet weather, and the class of humorous prints (so called) that filled the shop-windows: exaggerated foolish sketches of hunting, shooting, fishing; allegorical presentments of political parties with highly necessary explanatory 'keys.' The few comic broadsheets which paved the way for *Punch* were (with one exception that all my contemporaries will recognise) ill conceived and clumsily executed. The young fellows who purchase that popular paper at the railway station on Wednesday afternoons to enliven them on their way down into the country before it reaches the eager hands of their sisters, have no idea of the treat which it affords, for they have never been without it. A quarter of a century ago, such combinations of head, and hand, and heart—of conception and skill, and good feeling—as are afforded every week in what is familiarly termed the 'big picture,' were not to be purchased for threepence, nor indeed for any money. There have been not a few of them able to touch honest eyes with tears more tender than those of mirth. The social sketches of Mr John Leech, again, are the actual chronicles of English life in the upper and middle ranks during the last twenty years. I open the back volumes of *Punch*, and become possessed at once of all that my equals and contemporaries have been doing in my absence. I learn how they have passed their summers and winters; I see not only the sort of seaside-places they have visited, with the various classes of marine persons they have discovered there, but how they made love, and when, and even why, with the most accurate representations of every member of their families and households: not only what specimens of humanity, mounted upon all kinds of horses, from the three-hundred-guinea hunter down to the little hairy Shetland, compose 'a field,' but how folks lived and moved in country-houses, and how they lived when it was a frost and they couldn't move, or, at least, hunt.

This admirable artist informs me almost as much as he delights me; but he does still more. He convinces me (notwithstanding Sir Cresswell Cresswell's court) of the stability of the pillars of English domestic peace, of the virtues of *Materfamilias*, and the fidelity of her husband. We have to thank Mr Leech that that vulgar type of our countrymen, much

too coarsely executed to admit of any but the broadest characteristics—Mr John Bull—has been superseded by Paterfamilias. The sturdiness and dogmatism are indeed retained, but the senseless prodigality which no longer belongs to him (if it ever did), is erased, and in its stead we have a hundred genuine traits which often excite our laughter, but not less often arouse our affectionate respect. In the 'Rising Generation' we recognise a progeny worthy of such a parent, but with a greater tendency to refinement. Their precocity, with all its ludicrous assumption and cool impertinence, has nothing to do with vice. When we were their age, we were not permitted to leave our schools, eleven at a time, to play a cricket match in another county, or by nines, to row a race upon a distant river, with the crew of a rival seminary; we did not win public prizes with the Minie rifle; we had not books written about us, exhibiting all the system of our school-world, and recommending and effecting reforms in it. We were not public characters at twelve, and celebrities at fourteen; and if we had attempted to be so, we should have been quenched with the remark, that 'little boys should be seen and not heard.' Making allowance, therefore, for the difference in our social position, the Rising Generation of youths appears to be as good as we were, and (between ourselves) a trifle better. The brutality of boy towards boy at school, which was long considered to be beneath the notice of a master, and a matter to be winked at by a parent, is now the exception, instead of the rule. The opening chapters of our lives are no longer a tale of petty tyranny (illustrated with cuts), with its necessary train of lies and subterfuges. The boy's eleventh commandment—'Tell a lie, tell a good un, and stick to it,' is instilled in the youthful mind no more. The happiness even of a lad, is now held to be worthy of some consideration, and the inculcation of morality and good principle is not postponed until he shall have mastered Juvenal.

It is possible that materfamilias (who is extraordinarily sensitive about 'your dear papa') may feel some irritation at times, at the innocent fun which Mr Leech makes out of her delightful husband, but in reality, both she and 'the girls' owe him a large debt of gratitude. It is true that he found the family as good and honest as he describes them, but it is not every popular artist who is aware of the responsibility of his profession. He cannot, it is true, make people virtuous or vicious, by delineating them as one or the other, but he can do a very great deal towards it. Mr Leech's pictures are all in some sort moral lessons; for the young cannot fail to learn from them not only that their fathers and mothers lived upon the whole very happy lives, but that they were happy because they were good.

If M. Asolant and his fellow-scribes will permit me to dictate a second time what they should do to ascertain the manners and customs of our country, and the characteristics of our social and domestic life, I would ask them to step a few hundred yards from their beloved Leicester Square to the spot which I have heard one of their compatriots describe as 'the Salon of Egypt, Peekadeeley,' in other words, Egyptian Hall, and he will there receive the amplest information from Mr John Leech's Sketches in Oil. The hunting-pictures will indeed be 'caviare' to him. He will not understand how a medical practitioner—a man of education and science—can be so extravagantly fond of fox-hunting as to change his professional garments for those of the chase as he drives along in his carriage; 'Not be in time, oh, nonsense; send my horse on; see my patients early: dress in the brougham, and there I am.' He will not be able to see why Miss Ellen, who has ridden out to see 'the meet' under the guardianship of the old coachman, puts her pony at the fence, and leaves the road the instant that the fox has 'gone away'; he will imagine, when the coachman observes, 'Now, Miss Ellen, Miss Ellen! you

know what your pa said! You was to take the greatest care of Joey; that it is nothing but tender sympathy which prompts her to reply, 'So I will, Robert, and that's why I am taking him off the nasty hard road, poor thing.' What brutality and disrespect of the church will he conceive to be exhibited in the two foxhunters who leave the unhappy 'spilt' parson in the ditch, with the remark, that it doesn't matter, because he will not be wanted again till Sunday. It is the Boy of the hunting-field, however, who will probably excite our foreigner's most unmitigated astonishment. He will wonder why one duodecimo sportsman (aged ten), galloping to cover on ponyback, is so curious to inquire the weight of another young gentleman (aged seven), his companion, and be sorely perplexed with the reply, that he is sorry to say he is over four pounds, exclusive of saddle and bridle. He will doubt the probability of Master George upon the Shetland setting that diminutive quadruped at so awful a brook, in spite of the 'Hold fast, Master Georgey, it's too wide and uncommon deep:' for what French boy of the same tender years would have persisted in so wild a feat with an 'All right, Ruggles, we can both swim?' He will not recognise the wisdom of that paternal advice which the red-faced old gentleman on the tall bay is giving to his miniature companion: 'I say, my little man, you should always hold your pony together going uphill and over ploughed land;' and he will miss the charm of the young Nimrod's impertinent reply, 'All right, old cock! don't you teach your grandmother to suck eggs. There's my man by the haystack with my second horse.'

On the other hand, from almost all the pictures in Mr Leech's collection which are not illustrative of the hunting-field, the foreign visitor will not fail to learn more of England and the English in half an hour, than can be obtained by any other means in half a year. There are hints of scenery by sea and river, and 'bits' of upland and valley so characteristic, that the beholder may well consider himself possessed of the chief features of our land; while there are specimens, male and female, so typical of their different classes, that he who looks on them has seen more of English people than are to be observed during a lifetime passed in Leicester Square.

How beautiful, and yet how unangled are the young ladies! not too bright and good, indeed, for human nature's daily food, but honest, kind, and fair. Who that knows our sea-side resorts can fail to recognise the frequenters of that 'Mermaid's Haunt,' or the charming frequenters of it, with their long hair drying in the breeze,\* all engaged in marine idlenesses—sketching in water-colours, pretending to geologise with little hammers, or looking for those sticky curiosities to which Messrs Gosse and Kingsley have recommended their best attention. The 'Common Objects of the Sea-side generally found at Low Water,' is one of the most humorous pictures in the collection—a back-view of an infinite number of crinoline young ladies, who are engaged in looking for *algæ* for their *vicariums*.

Next to the hunting-field, Mr Leech delights in depicting the sea-side. It is there that he picks up his genuine mermaids, those Sairey Gamps of the sea, the bathing-women, with their 'Master Franky wouldn't cry—no, not he [the child is screaming]. He'll come to his Martha, and bathe like a man, I know.' Who, again, has not watched and admired that flushed, dishevelled beauty emerging landwards from her bathing-machine, and steadying herself with difficulty on the narrow plank? Who has not been moved to ungallant laughter at sight of the Round Hat laden with novels in a storm? or at the balloons into which the young ladies are involuntarily

\* \* Yes, my dears; I know it is beneficial for it, but consider the heart of your too susceptible Punch.'

metamorphised at the 'Nice Bracing Day at the Sea-side,' when the umbrellas are blown inside out, and the head of the Skye terrier becomes for once distinguishable from the tail? Finally, who does not perceive the photographic truthfulness of 'The Bathing Hour,' with all its accompaniments of health and happiness and innocence? The little children who are burying their laughing companion in the sand are alone a study for a morning. No artist has ever entered into the glee of childhood with such exuberant perception, from the miniature belles and beaux of the Juvenile Party in Belgravia, down to the dirty, ragged, happy children of Whitechapel, who, with an old go-cart, in front of a dilapidated house, are playing, by help of an imaginary footman, at 'fashionable calls.' A very slight explanation is necessary for even a Frenchman to enjoy all this innocent fun. At Ramsgate, which is perhaps the best known sea-side place in Great Britain, there are two effigies of soldiers placed as targets on the sand for visitors to shoot at with bows and arrows. Ellen and Aunt Fidget are bathing within sight of these objects, and the former, who delights in a harmless joke at the expense of her relative, exclaims: 'Good gracious, aunt, there are two officers!' Aunt Fidget, who is short-sighted, replies: 'Bless me, so there are! Well, they may be officers, but they are not gentlemen, I'm sure, or they wouldn't stand looking at us in that impudent manner.' As, indeed, there is scarce a single incident illustrated with which the English visitor is not familiar, so there is hardly a spot which he does not seem to recognise at the first glance.

The sign and seal of the popularity of any new diversion is its delineation by Mr Leech; and white was the day, doubtless, for the proprietors of the game of Croquet, when 'A nice game for two or three' came out in *Punch*, and blessed the hour for the manufacturers of Aunt Sally, when they knew that that lady was acknowledged as our common relation; 'Oh, Charles, isn't it fun?' exclaims a fair-player, stick in hand, to her lover; 'I've beaten Arthur and Julia, and I've broken Aunt Sally's nose seven times.'

It was my original intention to have selected for comment from Mr Leech's collection such sketches as seemed more especially admirable, but upon referring to the catalogue with which I had furnished myself for that purpose, I found I have marked them all. That this universal admiration is shared by most people, is evident by the observations one hears on all sides in the exhibition itself. 'O do come here, Augustus, isn't this perfection?' Then a duet of male and female mirth; and then, 'But it isn't better than this, Arabella, that I have just been looking at.' In another part of the room, 'Oh, mamma, isn't this like dear papa, when Miss Alamode's bill comes in?' Well, but it really is, you know. And isn't this the image of dearest Julia?' In another, 'Don't you remember when we crossed to Dieppe last July, that poor young couple who were so ill—why these are the very people!' *Angelina (to Edwin, whose only chance is perfect tranquillity).* 'Edwin, dear, if you love me, go down into the cabin and fetch me my scent-bottle, and another shawl to put on my feet.'

There can be no more gratifying tribute to the genius of an artist than such unstudied criticisms as these; but the purity of Mr Leech's pencil deserves even a higher eulogium from all who are acquainted with what popular pictures of a similar description are abroad, and what they were wont to be at home. It would have been easy for an artist who need not yet have been altogether a scoundrel—it would have been impossible, perhaps, for a French Leech to have overcome the temptation—to have flavoured his pictures with just the least *souçon* of impropriety, while the harm that would have resulted from ever so slight a dereliction would have been incalculable. Authors of very moderate circulation, have thanked

Heaven on their death-beds that they have never written a sentiment which they wished were blotted out; but it is a matter of thankfulness not only to himself but to his country, that John Leech—our national artist—has never drawn a single line which needs erasure.

#### FISHERIES OF THE PACIFIC.

It was long ago observed by a great philosopher, that if the inhabitants of the earth made the most of their powers and opportunities, they might subsist almost entirely upon the inhabitants of the sea. He may have been oversanguine in his estimate, but it is certain that the ocean is far more prolific of food, both for men and animals, than, in spite of the advances of science, is even now generally credited. That huge basin which extends from the shores of Australia to those of America, and from Behring Strait to the Antarctic Circle, abounds with all kinds and varieties of fish, from the whale of a hundred feet in length to the delicate eastern representative of our whitebait, which, from its diminutiveness and tenuity, shoots almost invisibly through the water. On the shores of the continents and islands which fringe this mighty ocean, man finds an abundance of fish—in some places, sporting and darting among the roots of the mangrove, so as to make it almost doubtful whether they belong to land or water—while, as he proceeds seaward into greater depths, he encounters all the stupendous varieties of the cetacea which court the solitudes of the ocean, and roam as far as possible from the haunts of the human race. All the watery portion of our planet's surface is the whale's field. Issuing from the icy precincts of one pole, he shoots with incalculable rapidity through all the intervening zones, and athwart the equator to the other, attracting, as he proceeds over this immense track, myriads of enemies, furiously bent on his destruction; so that, in all likelihood, the day is not far distant when the whale, like the mammoth and the mastodon, will be reckoned among the things that were. Before man had declared war against the Leviathan, it must have been a grand spectacle to behold the watery wastes of the Pacific thickly dotted with these mammiferous animals, sporting together, sucking their young, throwing up jets into the air, compared with which the water-works of St Cloud and Versailles are mere toys; or lashing the waves into foam, as they rolled, pitched, and revelled on the surface of the deep. They were then to be met with in incredible multitudes, and it is probable that many hundreds of thousands still maintain possession of their ancient homes, though they are gradually disappearing from certain portions of the sea, and have to be sought for in new waters.

By degrees, no doubt, every square league of the Pacific will be traversed, and all its groups, islands, reefs, shoals, and rocks laid down in charts; but up to this time, the whalers, in search of their prey, fall in constantly with new lands, robed in vegetable beauty, encompassed with coral reefs and circles of foam, or rendered inaccessible by incessant breakers. Occasionally, small islands burst upon the view in the midst of shining seas, with whose translucent surface, their eminences, tufted with emerald, strikingly contrast. Sometimes the groups and islands observed are nothing but level green plains, interspersed with clumps of cocoa-nut trees, which wave sad and lone in the wind, and annually drop their fruit, which there is none to gather. Whole clusters of islands have no inhabitants but the ocean-birds, which make them their procreant cradle, and scream and cry along the shores in concert with the dismal surge. Here and there, as the whaler pursues his track, he joyfully perceives smoke ascending among the palm-trees, or wreathing the crests of the jungle. Here he notes down in his log-book refreshments are to be procured, such as hogs, fowls, yams,



plantains, and cocoa-nuts. Sometimes the inhabitants are gentle, and in a harmless and simple way, barter their goods with the strangers, by whom they are nearly always imposed upon, robbed of their women, or otherwise maltreated. Occasionally, however, the savages, whether familiar with the white man or not, are truly deserving of the appellation by which they are distinguished; and flourishing their spears, or whirling their war-hatchets about their heads, rush fiercely into conflict with the invaders of their homes, and not unfrequently make them pay dearly for their contempt of hospitable laws.

No kind of life, however, can be in general more wild and solitary than that of the whaler. When he encounters the object of his search in the open ocean, he lowers the pinnaces from the deck of his ship, and putting into each six men, including a harpooner, despatches them against the prey. The service now becomes exciting and perilous. Approaching the whale silently with muffled oars, the harpooner, taking aim at the root of one of the lateral fins, where the animal is most vulnerable, lets fly his weapon; upon which, finding himself wounded, the whale plunges down into the depths of the sea, sometimes even lower than two hundred fathoms, the length of line usually attached to the harpoon. This line is carefully coiled in a tub; and lest it should become entangled in running out, and thus drag the pinnace to the bottom, a man is stationed on the gunwale with a sharp axe, to chop it off instantly in case of danger. To prevent its taking fire also, the sailors constantly throw water on it, as it runs and smokes from the rapidity of the motion. In a short time, the whale returns to the surface of the ocean to breathe, when he is again wounded, and a second time seeks safety in the depths of the sea. After a while, he emerges a third time, and maddened by pain, spouts aloft, with great noise through his spiracles, vast quantities of blood and water, beating the ocean around him into a red foam, till, his strength gradually failing, he turns on his side and dies.

When this takes place in the open sea, the blubber is cut off, and casked on board; but if near an island, the whale is towed towards the shore, where preparations are made along the beach for kindling fires, and melting the fat into oil. The men put on shoes furnished with long spikes, to enable them to maintain their footing, and descend upon the carcass spade in hand. They then plunge their implements into the blubber, which they throw as they would so much soft mould into tubs or casks, to be conveyed on shore for melting. When the island is entirely uninhabited, they fell the wood, and encamp peaceably on the beach; but as most of the larger islands of the Pacific swarm with natives, it is generally found necessary to plant pickets, and keep watch night and day, to prevent surprises. A group thus engaged presents a highly picturesque appearance; long reaches of fine sand or pebbles extending to the green sward, and overhung by woods, with the flames ascending here and there from immense fires, and numbers of men, some filling casks, others putting in the heads, or lifting them into boats to be conveyed on board, while others are fishing, cooking, or eating their meals upon the shore.

The destruction of the whale species now proceeds rapidly, since it takes from ninety to a hundred of these enormous fishes to supply the cargo of one ship; and it has been calculated that from ten to twelve thousand are either taken or mortally wounded in the course of a single year by the American whalers alone. The achievements of other nations have not been so accurately calculated; but if we estimate the whole amount of these animals slaughtered at from eighteen to twenty thousand annually, we shall probably be considerably within the mark. Where the water is clear, as in several parts on the coast of New Zealand, you may generally, near the old melting-

grounds, see the whole bottom of the sea strewn with the skulls and skeletons of whales piled upon each other, or broken into fragments and scattered by the waves. But the mighty hunters of the deep are not always victorious; sometimes the whale, goaded to madness, rushes against the ship, and with his adamant skull bulges in the side, and sends all on board to the bottom; and not unfrequently, when the harpooners are too venturesome, the pinnaces come within the swing of his tail, and are shattered to matchwood, while the sailors are thrown out upon the surface of the sea, so many masses of jelly. Occasionally, too, overtaken by storms, they are driven on inhospitable coasts, where they perish by starvation, or become the food of the natives. Among the icebergs and snowy mountains which girdle the southern pole, where the cold is intolerable, and tempests of hail and sleet beat eternally on the shores, numbers of mariners encounter, if possible, a still more horrible death, their faces and hands cracking and bleeding with the frost, their feet dropping off, and the vital principle yielding slowly to the numbing influence of the atmosphere.

The native fisheries, though conducted on an infinitely smaller scale than those carried on by the white man, are often more interesting in their incidents. To the natives, at least, the ocean is a beneficent divinity, since he feeds and sustains them throughout the year, and thus in many islands and groups attracts nearly the whole population to his margin, where they feast luxuriously on his gifts, and, no doubt, in their hearts cherish a sort of idolatry towards him for his inexhaustible bounty. Nothing can exceed the vivacity of a group of natives when they behold a shoal of mullets driven towards the beach by the porpoises. All the members of the tribe, men, women, and children, are then on the alert. The wind rolling vast waves before it from the east, which, near Moreton Bay, break about a hundred yards from the shore, brings along with it myriads of mullets, pursued by whole droves of porpoises. On discovering this avatar of plenty, the men and boys, with scoop-net and spears, distribute themselves along the sand, watching their friends the porpoises, for which they entertain a superstitious veneration, hemming round the mullet-shoal to the eastwards, leaping, plunging, and sailing to and fro in the rear of their prey. Now and then, under the promptings of appetite, one of the porpoises charges among the mullets, which, to escape his voracious jaws, run in as near as possible along-shore, upon which the natives, with their scoop-nets, make a dash at them, and nearly always secure a considerable number. While their elders are thus engaged, the boys disperse along the sandy flat, strewn with beautiful shells, and amuse themselves by spearing the mullets, as, to elude the porpoises, they advance into shallow water.

Nothing so much distresses the Australians as any violence offered to a porpoise; they look upon him as a benefactor; they respect his tastes, and admire his gambols, as, with unwieldy bulk, he sports in the waves, or darts through the smooth sea like an arrow. In truth, the intelligence of these animals is not a little surprising. Being particularly fond of society, they always move about in large troops, and may often, when the tide is rushing in, be beheld ascending between green banks up the course of rivers, where their backs flash and glitter like molten silver in the sun. Sometimes they become so enamoured of their own frolics and antics, that they omit to notice the state of the tide, and remain far inland, till the water at the river's mouth is scarcely deep enough to allow of their passing out to sea. Then they become alarmed, cease to gambol, and arranging themselves like an army in file, give the signal to their chiefs to lead the way. These having reconnoitred the shallow, retreat to a considerable distance, in order to

acquire the greater impetus; and then, with head erect, and fins displayed, darting seawards, they plough up sand and water, till they find themselves at large in their native element. In this enterprise, there is no crowding, no confusion, no hastening of one to get before the other. The larger go first, as requiring more water to float them, and the younger and smaller follow; the reverse proceeding to that of the elephants, who, when they have to cross a muddy river, send the most diminutive of the tribe first, because, if the larger and heavier preceded them, they would stick fast in their footmarks, and never be able to get out. Of course, the poor natives engaged in the mullet-fishery think of nothing but the amount of food obtained. To the stranger, however, who looks on, the scene is highly animated and picturesque; with green promontories running out into the sea on both sides, a brilliant sky overhead, huge breakers crested with foam rolling and dashing in before the breeze from the vast Pacific, aquatic birds wheeling and screaming aloft, and hosts of black fishermen, net or spear in hand, scattered among the porpoises.

Even this form of industry is less exciting, as well as less profitable, than the fishing for turtle, carried on throughout a considerable portion of the year. Almost everywhere on the Australian coast, the heads of turtles are found suspended on trees, either as offerings to the fetiches of the different tribes, or like the heads of the Bornean Dyaks, as trophies of victory. In the Arabian Desert, you constantly observe, in the gorges of the mountains, heaps or cairns of loose stones, thrown up by the Bedouins to conceal them as they lie in wait for the gazelles. So in the neighbourhood of Torres Strait, the turtle-hunters have made themselves cairns, though not for concealment, but only to mark the stations whence the best looks-out may be obtained. Here the dusky fisher plants himself, and as soon as a green turtle is perceived drifting past, notice is given to the tribe, and a canoe is pushed off, containing several of the boldest fishermen. Frequently, this branch of fishing is carried on during the night, when the bright moon, silencing over the calm surface of the sea, discovers every speck to the keen eye of the native. Generally, the turtles traverse the ocean in pairs, male and female, which are often therefore captured together. When the prey is discerned in the moonlight, the canoe in chase advances stealthily till it comes close up to the turtle, when one of the boldest and strongest fishers, taking a rope in his hand, leaps on the turtle's back, and slipping the cord about his neck, endeavours to turn him. The operation, besides being difficult, is attended with no little danger, for the edge of the turtle's cuirass is often armed with sharp and jagged points which deeply wound the thighs, or rip up the belly, of the swimmer. But as man must eat, so he must run all risks to obtain wherewith to satisfy his appetite. Foiled once and again, the savage still returns to the charge, now swimming round the turtle, now springing on his back, and at length, in spite of his huge bulk and vast weight—averaging between three and four hundred pounds—turns him on his back, after which he is towed helplessly towards the beach.

If the natives are bold and enterprising in the capture of turtles, they are in most cases equally absurd and imprudent in the use of what they have taken. Large numbers flock together, and prepare for a feast, which never ceases until every atom of the provision is consumed—the fat, skimmed off while the flesh is boiling, they sometimes drink in a fluid state, but occasionally preserve in a turtle's bladder, or in the joints of a bamboo. On some parts of the coast, the necessity of providing for the future has forced its way into the native's mind, and he accordingly cuts the turtle's flesh into strips, boils it in a melon shell, hangs it up on skewers to dry, and thus preserves it for several weeks. Far out at sea,

among the coral reefs, innumerable species of fish, many of them as yet unknown to science, are discovered darting hither and thither in the clear water, now diving and disappearing, amid the articulations of the submarine forest, now floating upwards almost to the surface, clothed in colours so brilliant as to eclipse the brightest flowers of the earth. Here also, along the fringes of the shore, are shells of rare splendour and beauty, glowing unheeded in the tropical sun, and beheld perhaps by man not above once or twice in a thousand years. In the Northern Pacific, the taking of the trepang or sea-slug is an employment of much profit, though of no great interest, apart from the character of the countries near which it is carried on. Formerly, on the eastern extremity of the Indian Archipelago, where it may be said to abut upon the Pacific, the sea-gipsies addicted themselves, as was natural, to all kinds of fishing. They lived entirely in their prahus, and avoiding the storms of the monsoons, sailed north or south in search of calm seas and agreeable warmth. Their migrations were regulated by the same principles as those of the birds; and they might now be seen anchored in the well-wooded creeks and bays of Magindanao; and presently, as you pursued your way towards the south, you would descry them in their picturesque barks, fishing, smoking, or mending their nets, on the rank and gorgeous coasts of New Guinea. For reasons difficult to be understood, these people have at length almost entirely deserted the sea, and taken to agriculture and gardening, in some of those spacious islands, which, in case of necessity, might afford a retreat to half the inhabitants of Asia.

Everybody is of course familiar with the shark, which in so many parts of the world renders bathing dangerous, performing the office of scavenger of the ocean, devouring everything, following ships athwart the ocean when there are sick on board, in the hope of being able to feast on a corpse, and lying off native villages to feed on every abomination that is cast into the sea. Once, in the Calvados group, a contest was witnessed between the sea-lawyer, as the sailors term him, and a sucking-fish, to whose tail a large piece of wood had been fastened by a fathom or so of spun-yarn. This villainous amusement is on board ship denominated spritsail-yarding. The contest is thus described by an eyewitness: An immense striped shark, apparently about fourteen feet in length, which had been cruising about the ship all the morning, sailed slowly up, and turning slightly on one side, attempted to seize the apparently helpless fish, but the sucker, with great dexterity, made himself fast in a moment to the shark's back: off dashed the monster at full speed, the sucker holding on fast as a limpet to a rock, and the billet towing astern. He then rolled over and over, tumbling about, when, wearied with his efforts, he lay quiet for a little. Seeing the float, the shark got it into his mouth, and disengaging the sucker by the tug on the line, made a bolt at the fish; but his puny antagonist was again too quick, and fixing himself close behind the dorsal fin, defied the efforts of the shark to disengage him, although he rolled over and over, lashing the water with his tail until it foamed all around. What the final result was, we could not clearly make out.

Another fishery carried on by the natives, though on a small scale, is that of the dugong, whose peculiar structure has given rise to innumerable fables. This is supposed to have been the Triton of the mythology, the Siren of the poets, and the mermaid of modern times. Fondness for the marvellous is natural to all mankind, especially to such as are thrown by circumstances to a great distance from the majority of their own race, and where in comparative solitude the imagination is left to exert its power. Thus the Dutch of Java, when they behold by accident a dugong among the rocks, suckling its young upon

the sunny waters, but diving out of sight as soon as discovered, persuade themselves they have seen the mermaid, and the journals of Batavia are filled for weeks with controversial paragraphs on the existence or non-existence of the maiden of the sea. Several species of dugong are known to naturalists: one in the Gulf of Mexico, another on the coast of Chili, a third among the Indian islands, a fourth in the Red Sea, and a fifth on the western edge of the Pacific, which is the Australian variety. This is sought by the natives exclusively for its oil. On the shore of the new colony of Queensland, there is a long narrow island, consisting of a series of sand-hills, some of which approach a thousand feet in height, interspersed with morasses and lagoons, and sprinkled with woods of the cypress-pine, greatly prized for ornamental work. The sand on the beach is kept compact and solid by the agency of several grasses which creep along its surface, and spreading like a net on all sides, prevent its being blown away by the winds, and at length, with the aid of moisture, convert it into solid ground. In all the great deserts of Asia and Africa, a similar phenomenon is in many places observable, the sand-hills of all shapes being kept together by something like our bent grass, through the sedgy blades of which bright and beautiful wild-flowers often disclose themselves to the eye. The same is the case on Moreton Island, where you find a convolvulus with bright pink flowers, and a stem which sometimes measures fifteen yards in length. Alternating with this, is another plant with clustering yellow flowers, which spangle the sandy slope down almost to the water's edge. The dugong, the smallest, perhaps, of the cetacea, feeds along-shore on a pale, green-coloured sea-weed, and, during the rainy season, frequents the coast from Endeavour Strait to Cape York, for the purpose of bringing forth its young. An author unacquainted, apparently, with any but the Australian variety, thus describes the native mode of taking the dugong: 'When one is observed feeding close inshore, chase is made after it in a canoe. One of the men, standing up in the bow, is provided with a peculiar instrument used solely for the capture of the animal in question. It consists of a slender peg of bone four inches long, barbed all round, and loosely slipped into the heavy, rounded, and flattened head of a pole fifteen or sixteen feet in length; a long rope an inch in thickness, made of the twisted stems of some creeping plant, is made fast to the peg at one end, while the other is secured to the canoe. When within distance, the bow-man leaps out, strikes the dugong, and returns to the canoe with the shaft in his hand.' Like the whale, the dugong then plunges down into the sea, but returning to the surface in a few minutes, dies, without requiring a second wound. It is from six to eight feet in length, and affords the captors a plentiful feast, its flesh being baked in the Polynesian stone-oven. Occasionally, instead of being eaten, the blubber is converted into an oil, which is highly valued by the natives.

Little, unfortunately, is known of the seal-fishery of the Southern Pacific, which is sometimes carried on within the Antarctic Circle. The Americans, who may almost be said to monopolise this business, regard secrecy as the most important part of their capital; and in order the more completely to preserve it, when any new island abounding with seals is discovered, the captain enters the longitude and latitude in his private journal, and the crew are never allowed to know exactly where they are, so that on returning to Nantucket or New Bedford, they are unable to give information to any who might interfere with the enterprises of their former employer. It is known, however, that the sealers are far more venturesome and daring than the whalers, run greater risks, and encounter more awful storms. With the seal of northern seas the world has long been familiar, but it is only of late years that the chase of the southern

variety has been carried on systematically, and on a large scale. Still, little advantage has been derived to science from the proceedings of the sealers, since they purposely involve their undertakings in darkness, and refuse to disclose even to their own government the geography of their field of operations; but from other voyagers we know the characteristics of that portion of the globe—rocky, ice-bound, tempestuous, and fiercely cold, where nature produces so little to sustain animal life, that it is surprising what the seals can discover to feed upon; yet they do find abundant pasture, and accordingly multiply and cover the wild shores and islands in the precincts of the polar circle, whither they are pursued and captured by man, to whom, except the very poles of the world, scarcely any spot is inaccessible.

## MY WEDDING.

BY AN OLD BACHELOR.

It wasn't *my* wedding exactly, because I've never been married, and never mean to be.—No, they are not, my sneering friend; I wouldn't have them if they were ever so sweet; I don't care for grapes of any kind, English or foreign, hothouse or otherwise, large or small. I don't think I should have the least difficulty, notwithstanding your insinuations, in getting accepted, for women are such foo—I mean, have so much penetration; but I am thankful to say that I am not altogether without common sense. I hope I may say without conceit that I profit by the warnings which are vouchsafed to me—that I am not unmindful of what I owe to the acquaintance of several married couples—that the glimpses I have had of the internal economy of their establishments, and the confidences to which I have been admitted, have not been without a beneficial effect upon my mind. Moreover, I believe I have a benevolent and sympathising heart, and were my determination not what it is, I should from the very bottom of my soul pity any young woman who should be induced to take me to husband; for, notwithstanding that it may seem to involve a slight discrepancy with what I have already stated as to the penetration of women, I should have the lowest possible idea of that young woman's sense; the very short distance that she would appear to me to be removed from an idiot, would excite my profound commiseration. I flatter myself I should make the very worst husband that ever was known. I don't allude to Bluebeards and wife-beaters, and that sort of thing; I should be far worse than that; for I believe any woman worthy of the name would sooner be murdered than be treated with inattention, and I feel convinced I should treat my wife with inattention: I mean under certain circumstances—when an angry retort, for instance, was expected of me—when a passion of tears followed the disappointment of that expectation—when hysterics supervened—when articles of furniture were handled in a manner which shewed no regard for their symmetrical appearance or original cost—when bonnets were more than darkly hinted at—when shawls were introduced as a topic of conversation—when the shabby appearance of my children was contrasted querulously with the smartness of my neighbour's—when many another cause for a 'few words' arose, such as my confidences assure me do arise; at all these times, I am sure I should treat my wife with inattention. I have a wonderful gift of *vis inertia*; I think I could have slept under the stormings of Xantippe, and smiled with indifference under the slipper of Omphale. Oh, I should be such a brute!

Well, then, I say it wasn't exactly *my* wedding, but I call it mine because it was the only one at which I was ever present, and I think I can safely promise never to be present at another. Don't talk to me of the duties you owe to relations, and the attentions



you ought to pay to friends; isn't the obligation reciprocal? I'm quite sure my absence wouldn't cause them half the pain that my presence would cause me, and them too, for the matter of that, for I think I may say with truth, that at my wedding I had the satisfaction of helping to throw a partial gloom over the whole affair; indeed, I overheard a wedding-guest remark, that 'that sour-lookin' brute of a feller with a big nose' (meaning me) 'looked as if he was at a funeral.' And that is just what it is; my line is funerals; if anybody wants anybody to attend a funeral, he has only to apply to me—I'm quite at home at them. I think I could fill any part, give exactly the proper expression of face, say exactly the proper number of words, and drink exactly the proper quantity of wine (or spirits—I have seen some people take spirits) for any 'follower' from the 'near relative' down to the 'complimentary.' But as to weddings—pah!

First of all, my wedding cost me too much money. I was obliged to have a new suit of clothes, which cost me *a* pounds, *b* shillings, and *c* pence; or leaving out the shillings and pence as (comparatively) of no account, it stood me in exactly *a* pounds. Now, that is a large sum of money—an incalculable sum, one might almost say—and makes a very large hole in an income of *x* pounds per annum, paid as you can get it, and sometimes not at all; so that on that account I objected strongly to the wedding. That the clothes were gorgeous, I don't deny. The frock-coat was blue—too blue a great deal, it seemed to me. Then there was the waistcoat, double-breasted, of a delicate straw-coloured tint, exquisite texture, and with two rows of Maltese buttons. Moreover, trousers there were, cut to a marvel of fashionable precision, of the softest woollen cloth, too soft almost for mortal leg, hanging with a studied negligence from the knee to just over the instep, light of colour, and with a wondrous violet piping at the seam: socks of silk, and striped withal: boots of patent leather, the patent being granted, I imagine, for elegance combined with agony: a pocket-handkerchief of white—the very whitest—silk, with a purple border: a shirt—but it is beyond me to describe that prodigy of needle-work; I must refer the curious to the hosier from whose workshop it came, and whose address I will forward on receipt of two postage-stamps; suffice it to say, that it might have been made by Minerva herself in her best days, and that the wrist-bands were fastened by curious studs fashioned out of the flashing yellow gold: a blue zephyr tie: a new hat from Lincoln and Bennett's; and lavender-coloured gloves—none of your two-shilling rat-skins from Paris, but the real three-and-ninepenny article, manufactured out of skins stripped—for so the quality is improved, I understand—from the living body of the midnight cat.

The outfit, therefore, I think I may say was gorgeous; but it had many disadvantages besides that of expense, for, with the exception of one or two articles, I haven't the courage to wear the apparel out. On the few occasions upon which I have come abroad in it, my appearance has been the cause of much scoffing and jeering. I have not traversed a single street before one horrid boy raises a shout of 'Ooray!' and a responsive boy takes up the cry with: 'Oller, boys; 'ere's another guy!' so that my costly suit has been laid by in a drawer, wherein it may be seen by the public every Greek kalends at one shilling a head. But at my wedding it was different; it was considered quite appropriate; and much surprise was expressed as I walked up the aisle at church that a 'eavy swell like that should look so sorrowful-like.' 'Fancy lookin' miserable in them clo's!' said one old woman to another, who sagely replied: 'P'raps his boots pinches 'im, poor gen'l'man; he walk as if they dew;' and they certainly did; but that was not the only reason. Besides that, and a natural

inclination to be lowered in spirits by the merriment of my fellow-creatures, there were other causes, as will appear. I was an 'odd' man—one who made up an uneven number—and I was to fill no office at the wedding; but my relative who was going to be married particularly requested my presence at the church, for no other reason I can think of except a desire, which seems to possess most of my relatives, to have me do what I don't like. So I was not to go with either bride's or bridegroom's party, but was to meet what they called 'the procession' at the church; and 'the ceremony,' my note assured me, would 'take place at half-past ten o'clock precisely.' I thought it was rather early, but determined to be punctual, and therefore, exactly as the fourth beat of the half hour resounded from the clock, there stopped at the church-doors a Hansom cab, in which was the gorgeous array (described above), and in it was a melancholy man. The melancholy man looked more melancholy still as he gazed at the doors of the church, for those doors were closed; no bell was ringing, no mob was collected, no symptom was there of the celebration of an imminent mystery, whereby two persons were to become one.

Had I mistaken the day, or peradventure the hour, or more probably the church? for people couldn't very well be married earlier than half-past ten. Had either the lady or the gentleman repented even at the eleventh, or rather half-past tenth hour? Had the ghost of a former lover appeared to either in the night, and solemnly protested against a violation of plighted troth? In any case, had I gone to an expense of *a* pounds, *b* shillings, and *c* pence—to say nothing of a bootless cab, a hurried breakfast, a flushed face, and aching feet—for nothing? The thought was madness; and to add to my sufferings, boys and women began to collect—as they always do—not less mysteriously than the earth-sprung Sparti of Cadmus, in a spot which a moment before was deserted. They discerned the state of things, as they imagined, at once, and 'O my! 'ere's a swell come to be married, and the gal won't come,' said one with a titter. 'You'd better go 'ome, and change yer clo's,' said a second—'she's got another mate.' 'Shall I fetch the parson?' asked a third. 'Keep a good 'art,' recommended a fourth; 'dessay she'll come when she's cleaned 'erself.' And 'clean yer boots, sir!' chorused three boys, offering the usual panacea; but declining that sort of consolation, I managed to find out from them, by a judicious use of copper and questions, where the clerk of the church lived; and from him I discovered, a little to my relief, that the hour had been changed to half-past eleven. Only a very little, for what was I to do in the meanwhile? To descend and walk about the streets, was to expose oneself to certain insult and possible pelting, which would interfere with the effect of the gorgeous array; to enter a place of public entertainment, was to court the stare of loafers and others, and staring is a torture of which I have as great a dread as had Hazael the Syrian; to drive about in the cab, was to ruin oneself completely. But what is complete ruin to insult, pelting, or staring? So, having ruined myself, as the most prudent course, I appeared at the right time at the church, and had the satisfaction of at once perceiving that I was regarded as of no earthly consequence, and that, had I stayed away altogether, my absence would have been remarked by no one—yes, I beg pardon, by one person alone—my relative, who was going to be joined in holy matrimony. My relative, I must be candid enough to allow, gave me a smile, a pressure of the hand, a whispered word of thanks, and a brief apology for not informing me that the hour for the ceremony had been changed; and then left me in isolation.

The beadle told me to stand back, but perceiving that I had the typical silver sprig in my button-hole, relented so far as to permit me to lean against a pew-

door in the rear of the party, and humour my miserable condition. Everybody else had something to do. The bride and bridegroom of course had to be married, which would serve to occupy their thoughts at any rate for so long as the ceremony lasted. The bridesmaids had to shew themselves off, and simper, and look as pretty as they could (which wasn't very), and ogle the groomsmen, and express to them, by the eye, how very little objection they would have to take the place of the female principal. The groomsmen had to pass their fingers through their hair, twirl their moustaches (if they had any), pull their whiskers (if they hadn't), or rub their chins (if they had neither). The old gentleman with the gray hair had to give the bride away, which, though not, as it appeared to me, an arduous task, was as much as he could manage, with copious perspiration, mental anguish, and shifting of the legs, to accomplish within the time. The clergyman had his work cut out for him. The clerk had to make responses, and keep his eye sternly fixed upon the couple, whilst his mind was filled with a vision of fees. The male friends had each a female friend to keep in order, and warn against the impropriety of giving way too much to the feelings which (I don't know why) are said to be natural to the occasion. The spectators had to make their remarks upon the dress, looks, and behaviour of every one belonging to the party. The vergers had to tell the spectators—without the least effect, by the way—to keep perfectly quiet; and even the organist had to sit with his fingers upon the keys, ready at a moment's notice to burst forth with the glorious music of the Wedding March. I alone had nothing whatever to do but to lean against my pew-door, and get redder and ever redder in the face, for that with me is a necessary consequence of any uncomfortable position. I would have been thankful for any—the lowest—occupation; I would willingly have held the horses' heads outside the church-door (if I had been allowed to change my clothes); and I would have performed the duties of clerk gratefully (and the more fees the more gratefully). As it was, I had to content myself with saying 'Amen' as often as I could, and as loudly as I might, without getting into difficulties with the authorities, which was only a very slight, and withal intermittent relief.

It did not seem to me quite right that I should join in the remarks of the spectators, and draw their attention to the bride's nose, which was as the nose of a woman who has a cold, and to the ghastly paleness of the happy bridegroom, who, to judge from his appearance, felt that he was being publicly denounced from the altar as an example to his fellow-men; or even to inform them that I knew both the lady and the gentleman quite well, and could assure them that it was only at seasons of great excitement, or emotion of any kind, that the redness of the former, and the pale-facedness of the latter came on—that under ordinary circumstances the lady's nose was perfection, and the gentleman's complexion fresh-coloured and jovial—that the lady scarcely ever took more than one glass of wine at a time, and the gentleman scarcely ever less than six glasses. Nor were my spirits improved by certain words which fell from the clergyman's lips, whereby he implicated me in a wish for a contingency which I think I should have been more inclined to regard with resignation than desire with vehemence, for I had heard many worthy persons complain of the over-population of the country, and it seemed to me a strange thing to pray that it might be added to. More especially strange did it seem to me in this case, for, though the gentleman generously declared that he endowed the lady with all his worldly goods, it occurred to me, who knew his means, that he should have said he would have done so had he had any, and the somewhat limited amount of 'goods' which would go to the sustenance of the perspective addition to the over-population of the country belonged

to the lady alone. However, I determined to drop occasional hints, when opportunity offered, as to the misery which was likely to ensue from the granting of the prayer in question, for it is undoubtedly the duty of everybody (who wishes to be hated) to check every symptom of taking too cheerful a view of life, and thus to relieve his conscience. Other matters there were which caused me much affliction. I was grieved to see the levity with which the bridesmaids treated the affair; they positively giggled at the sacrifice of two human beings, each promising to take the other for better or worse before they could have the least idea how bad that worse might be; they seemed to think that the end and object of life was obtained when a woman could no more be called spinster (though shrew to me is as unpleasant a term); and they twisted themselves about, and fanned themselves, and whispered to one another, and cast defiant glances at the spectators in anything but a seemly manner. My affliction was increased when, at the signing of the names, I saw how completely the good education which I knew had been bestowed upon both bride and bridegroom had been thrown away: it was perhaps the only time in their lives that they would have an opportunity of inserting specimens of their handwriting in any public record, and the specimens they did insert were by no means creditable. I shuddered to think what the mistress of the expensive boarding-school to which the bride had been sent would have felt, had she seen the miserable result of all her pains; and as for the bridegroom, he had been at school with me, and I can only say that had old Barker seen his signature, he would have cased him on the spot, in the sacred precincts of the vestry, as he stood in his wedding-garments. The conduct of the spectators, too, as we passed down the aisle, was very saddening; they seemed to share in a manner what they innocently supposed to be the happiness of the principal figures in the group; some of the females appeared to take pleasure in touching the bride's clothes, as if they expected that it was lucky, or that a sort of marriage-infection would emanate from them. Here and there, a mother directed the attention of a she-infant to the extravagant dresses, distended petticoats, poisonous wreaths, and useless bouquets of the bridesmaids, and with admiring cries of 'Oh! pretty, pretty,' did her best to inoculate her offspring with a love of finery, which, I had no doubt (such is my confidence in maternal training), would in due time develop itself to the detriment of both; and some persons had even learned so ill their lesson of life as to 'wish' the bride and bridegroom 'joy.' It is astonishing how difficult it is to make some people thoroughly selfish; in the midst of their troubles, you have only to let them hear your piping, and they will dance the dance of sympathy. Or can it be a fawning spirit whose natural inclination is to worship seeming prosperity?

There was one of the party who had more sense; this was the elderly gentleman who had given the bride away. He was by no means such a fool as he looked; indeed, that was impossible; and upon proposing the toast of the day at breakfast, he made a speech which quite met my views. He evidently thought highly of the practice in vogue amongst the ancient Egyptians, who at their entertainments had a dead man's skull placed in a conspicuous part of the table, to check, I suppose,\* any tendency towards hilarity. He commenced by informing us that 'in the midst of life we are in death,' and then held a consultation with his pocket-handkerchief. The result of this consultation was, that he repeated his former statement, from which he drew several conclusions all in favour of

\* Our contributor 'supposes' wrongly. The Egyptians instituted the skull system for hilarity's sake. 'Let us eat and drink, for to-morrow we die.'

being constantly on your guard against enjoying yourself, and against ever supposing that happiness to-day would not be followed by inevitable misery to-morrow. He then told us a little of the biography of the bride's father. That father, he remarked, with an air of satisfaction, was now in his grave, and would not behold his daughter's union—happy union, he hoped—though he evidently thought otherwise—with the man of her choice. He then described to us that father as he had last seen him—worn with toil, undergone to procure his children a competency—pale, emaciated, sinking into an early tomb; and he led us to believe that the bride reminded him forcibly of his departed friend. Hereupon, of course, the bride and bridesmaids, who had hitherto borne his remarks with tolerable equanimity, were overcome with emotion, and wept until the end of his speech. Matters were now, I thought, assuming a proper aspect; for such was the effect of the old gentleman's speech, that we drank the health of bride and bridegroom very much as though we were drinking to the memory of her deceased father; but so soon as the bridegroom rose up to return thanks, I saw that everything would go wrong again: the bridegroom returned thanks in what he and others no doubt considered a humorous, but I a flippant speech; the bride was all smiles again; the bridesmaids were all vivacity and inebriation; the men were all playfulness; and by the time the travelling-carriage arrived, and the slippers had been flung, to such a pitch had the hilarity reached, that I was glad to hurry home, and read *Cecilia in search of a Wife*.

#### IN CANTONMENTS.

THE barracks of our soldiers at home are generally formidable-looking, not to say jail-like structures of stone and mortar, arranged in squares girt round by lofty walls, and guarded as to their nail-studded gates by sentries in the brightest of scarlet or the darkest of blue. With some such idea of a garrison firmly impressed upon his mind, the British citizen, were he suddenly deported to Hindustan, would by no means recognise the dwellings provided by a paternal government (under climatic pressure) for his pipe-clayed brethren in India. Seeing that there are just now so many thousands of them, sappers and gunners, mounted and foot fighting-men—to say nothing of a six percentage of wives, and a due proportion of children—scattered widely over the three presidencies, and lodged under regulation roofs of some kind, it may not be amiss to endeavour to convey to home-folk some notion of the soldier's dwelling and mode of life in the 'glorious East.'

No one needs to be told that we English occupy our vast possessions in India by means of stations, all now well stocked with military, dotted over the country within distances of each other varying from thirty to a hundred miles; and that, the presidency cities excepted, the number of pure and mixed blood Europeans in the largest of these stations, civilians and soldiers together, falls very much below that of the inhabitants of the smallest country town in England. It is well understood, also, that, save in Bengal Proper, where the indigo franklins rule iron-handed over their factories, there are few English residents to be found throughout the country, except at the stations. Our Mogul predecessors had a by no means despicable eye for a valuable military or commercial position,

and so, indeed, had the indigenous sovereigns who reigned before the Mussulman conquest; in most of the desirable situations, desirable, that is, in all but sanitary respects, cities had been founded, and fortresses built, by one or other of the successively dominant races, long before the first humble chapman from Britain dropped anchor in the Hooghly: witness Peshawur, at the north-west corner of the Punjab, which long watched over, though not always vigilantly, the formidable Khyber, the gateway through the never-tranquil Cabul frontier, and guards it for us still; Ferozepore, on the hither bank of the Sutlej, the great south-eastern boundary river of the Punjab, valuable to us as our frontier garrison while the Sikhs were independent, more so when they became our deadly foes, sixteen years ago, and by no means worthless now that they have become the most loyal, as they are the bravest, of our eastern subjects; Agra and Delhi, admirably situated both for commercial and military purposes, on the banks of the Jumna; Cawnpore on the Ganges, a mournful place to think of five years since, but our most useful basis for Lord Clyde's Oude operations a little later; and Allahabad at the confluence of both rivers. No better testimony to the value of the position of this last-mentioned city can be given than the fact, that it has been selected to be the grand meeting-point of the great Indian railways. Half-a-dozen years hence it will be, let us hope, the Crewe or Swindon of Hindustan.

We have almost invariably adopted the important places of our predecessors, settling down, however, at a comfortable distance of three or four miles from the large native cities, and building, on the best sites at our command, our dwelling-houses, our barracks, our shops, our churches, and even our theatre and assembly-rooms, if we happen to be sufficiently public-spirited. A certain portion of the place, varying in extent according to the strength of the troops, is measured off, and rigidly defined with boundary pillars; this is placed under the exclusive control of the 'officer commanding the station,' generally styled a brigadier, a title unknown in the army at home during peace; and it is called cantonments, a term also unfamiliar to the English ear. Here are the barracks of the military, called after the different branches of the service occupying them, the artillery, the cavalry, or the infantry 'lines;' here also are the houses occupied by the officers and the station staff; in addition, ranges of mud structures, like indifferent cart-sheds, are to be seen, tenanted by a multitude of natives, vendors of grain, vegetables, milk, butter, poultry, goods, and pedler's wares of different kinds; boot-makers, barbers, money-changers, blacksmiths, carpenters, all permitted to live there, for the convenience of the soldiers, under the title of the 'regimental bazaar establishments.' For the convenience of the officers, there is also a European or Parsee merchant's shop, at which all varieties of articles may readily be procured.

The quarters of the common soldier are what now chiefly concern us, the subject being brought forward in the hope of a remedy being found for some obvious defects of arrangement. In the plains of India, the ground is almost invariably a dead and eye-wearying level, with a surface, in general during the hot season, of a dull brown colour, from patches of burned-up grass, or gravelly and white with sand and dust: such does not seem a pleasant site for habitable edifices, but better can rarely be found. On this, to accommodate a single regiment of the line, are constructed, in two rows—one called the front, the other the rear—about a dozen separate buildings, long and narrow, each about the height of an ordinary house, and ten or more yards apart from one another. The roof is lean-to, covered

\* The writer wishes it to be understood that his description applies to Northern India only; that is, to so much of our Indian territories as lies north of the twentieth parallel of latitude, and is included in the Bengal presidency. In Madras and Bombay, which the writer has never visited, different systems may prevail.



with tile, or, in too many cases, with a leaky and highly combustible layer of grass, which answers to thatch in the Anglo-Indian mind. The walls are of brick, either kiln-dried or sun-dried, according as the barracks are permanent or temporary, scrupulously and glaringly white-washed, and a veranda of thatch or tile, supported on pillars of wood or brick, runs along the whole length of each building on both sides. If it were not for this latter, the barrack would very closely resemble a one-story manufactory for cordage. Except in Fort William, and one or two of the other older stations, like Chinsurah and Dinapore, barracks of more than one story are to be seen nowhere. Each of the above buildings is intended to accommodate one company of a regiment of infantry—that is, about one hundred men—so there must be ten of them to house the unmarried privates alone. Within convenient distances are the cook-houses and wash-houses, &c., for every company. In addition to the companies' barracks, and built very much on the same plan, must be enumerated the hospitals, one for the men, and a second for the women and children—spacious, alas! they must be—and the hospital out-buildings, the married men's quarters, the canteen, the non-commissioned officers' mess-room, the guard-house, the orderly-room, the regimental prison and cells, the school, the tailor's, and gunsmith or armourer's workshops, the majority of them distinct buildings, and all together covering nearly half a mile of ground in length, inclusive, of course, of the spaces between each. All this contrasts very remarkably with the compactness of the barracks at home; but the climate, as well as the necessity for housing wives and children, makes abundance of room the chief thing to be thought of in quartering troops in the East.

Ascending a step or two to enter one of the company's barracks, you find yourself in the long veranda, whence numerous broad and lofty doorways lead into the barrack. This is open to the roof, an obviously good arrangement in such a climate, provided the roof itself is water-proof, and one can see clear through the building from end-wall to end-wall. The principal furniture is, the sleeping-cots of the men; a box, fixed to the ground (which latter is never wood-floored, but tiled or flagged, or, better still, covered with a hard compound of lime, known as 'chunam'), at the foot of each bed, to contain the kit, &c., of the occupant. Down the middle of the barrack are tables and benches for the men's use at meals; and in the walls, at each bed-head, are racks and pegs for the soldier's rifle and belts. This is all, unless one notices the mats and screens hung over each door, to deaden the glare, and exclude the flies—the punkahs, suspended from the roof, and kept in motion during the hot weather all night, and the greater part of the day, by coolies; and, where the hot winds blow fiercely, the tatties, the screens made of the fragrant kus-kus, a grass root well known to the perfume-maker, through which, kept perpetually moist, the furnace-blast from without passes cool and odorous. These last, however, are comparatively recent luxuries for the private: time was, not at all distant, when his barrack knew neither punkah or tattie; for it has been only lately discovered, even in England, that the more comfortable, contented, and cleaner you keep your soldier, the healthier he is, the better able to meet the calls of service, and the less he costs in the end. Such is the unmarried soldier's dwelling-place in India North, and here he passes the greater part of his time; he cannot be allowed to roam abroad under a murderous sun, and during seven months of the year he must not leave his quarters between 8 A.M. and 5 P.M. without special permission. His is an uninviting life, though he has many apparent advantages over the soldier at Plymouth or Aldershot; he has, for example, much less monotonous duty, and very much less drill; he has

his daily rations *gratis*, liberally supplied, of meat, vegetables, bread, rice, tea, or coffee, sugar, salt, spices, and firewood; he is consequently so much better off in the pecuniary sense, that he can enjoy little luxuries for his mess-table, and afford to pay native servants to cook for him, to shave him, to polish his arms, to blacken his boots, and to whiten his belts. (The writer has seen a stout gunner lying on his bed, with one native fanning him, and another tugging off his boots and overalls after parade.) He has a regimental canteen supplied by government, and managed by a committee of his officers, where he can purchase at a cheap rate a fair allowance per diem of sound English beer or porter, and, I am sorry to add, a large dram of potent Indian rum. But all these benefits are counterbalanced by the misery of the long dreary hours within doors the unlettered warrior has to get through, and which he consumes either in excessive sleep, or thrown on his bed, pipe in mouth, exchanging slang, or worse colloquial currency, with his neighbours. A few may be seen turning over the pages of a cheap novel, or one of the London penny illustrated journals; but the most refined reader amongst them rarely seeks a higher class of literature than this, although each regiment has its well-stocked soldiers' library.

Seeing how much has been done by the government to alleviate the soldier's condition in India, one wonders that no proper provision has yet been made for his amusement; regimental workshops have, it is true, been recently instituted; so have comfortable reading-rooms and soldiers' institutes been established in some stations; but the first presupposes the soldier industrious, the second requires a certain amount of intellectual refinement on his part. Now, the majority of the men seek to pass time in amusement and nothing else; gardening in the cold season is a great recreation, so is cricket; but for the terrible hot season the men have nothing to entertain them. One want that suggests itself to the writer as capable of being easily supplied, is a covered-in court, where the soldier might play rackets, fives, nine-pins, and other such games. These are what, in his present scantily educated condition, the Saxon and Celtic private most delights in. Sheltered from the sun, he could take exercise without detriment, and he would forget his prison-life in the harmless excitement attendant upon sports of mingled skill and activity. Until some remedy of this kind is provided, the unmarried soldier's life in India may be considered very unendurable. The soldier has many friends; but his needs and his tastes are very much misunderstood, so that the efforts made in his behalf are too often in the wrong direction.

#### TRIFLES.

THE massive gates of Circumstance  
Are turned upon the smallest hinge,  
And thus some seeming pettish chance  
Oft gives our life its after-tinge.

The trifles of our daily lives,  
The common things scarce worth recall,  
Whereof no visible trace survives,  
These are the mainsprings after all.

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